SOUTHERN TEXTILE BULLETIN

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Clark's Annual Spindle Increase List

A total of 565,500 spindles were installed by Southern cotton mills during the year 1927. The following list gives the name and location of each mill that increased the number of its spindles, together with the total by States and the total for the South. This information is compiled from data from Clark's Directory of Southern Textile Mills. Figures are as of January 1, 1928, and include machinery moved to the South from other sections.

Alabama

	Spindles
J. A. Meinhardt Industries, Inc., Anniston	1,800
Wellman Cotton Mill Co., Athens	5,800
*Stroud-Holcombe Cotton Mills, Inc., Birmingham	8,328
Indian Head Mills of Alabama, Cordova	864
*Connecticutt Mills, Decatur	33,000
*Sauquoit Spinning Co., Gadsden	20,000
Dallas Mfg. Co., Huntsville	4,480
Lincoln Mills, Huntsville	10,000
Kilby Cotton Mills, Montgomery	720
Montala Mfg. Co., Montgomery	2,000
*West Boyleston Mfg. Co., Montgomery	33,000
Micolas Cotton Mills, Opp	1,550
Autauga Cotton Mills, Prattville	3,120
Buck Creek Cotton Mill, Siluria	554
Avondale Mill, Sylacauga	3,808
California Cotton Mills, Uniontown	5,904
Total	134,928

Arkansas

*Morrillton Cotton Mills, Morrillton	10,000
Total	10,000

Georgia

American Textile Co., Atco	15,000
Athens Mfg. Co., Athens	8,700
*Carolina Mills, Carrollton	4,000
Goodyear Clearwater Mills, Cedartown	20,404
Eastman Cotton Mills, Eastman	5,200
Oak Mfg. Co., East Point	5,000
Trio Mfg. Co., Forsyth	628
*Chicopee Mfg. Co., Gainesville	42,240
Milstead Mfg. Co., Milstead	2,040
*Southern Brighton Mills, Shannon	25,000
*Martha Cotton Mills, Thomaston	30,000
Trion Co., Trion	22,476
Total	180,688

Louisiana

*L. H. Gilmer Co., Shreveport	5,000
Total	5,000

North Carolina

*Belmont Fabric Co., Belmont	5,000
Sapona Cotton Mills, Cedar Falls	700
*Columbus Cotton Mills, Columbus	1,800
Patterson Mfg. Co., China Grove	4,080
Dixon Mills Inc., Gastonia	2,040
*Allred Mills, Granite Falls	6,000
Cannon Mfg. Co., Kannapolis	56,000
Park Yarn Mills Co., Kings Mountain	7,512
Phoenix Mills Co., Kings Mountain	692
Rhodes-Rhyne Mfg. Co., Lincolnton	1,000
Long Island Cotton Mill Co., Long Island	208
Rhodhiss Mills, Rhodhiss	1,500
Entwistle Mfg. Co., Rockingham	4,800
*W. H. Draper & Co., Rocky Mount	1,000
Rocky Mount Mills, Rocky Mount	1,532
Rowan Cotton Mills, Salisbury	5,504
Ora Cotton Mills, Shelby	1,116
Leaksville Cotton Mill, Spray	600
Bloomfield Mfg. Co., Statesville	672
*Phoenix Mills, Inc., Statesville	5,000
Fountain Cotton Mills, Tarboro	960
Miller Mfg. Co., Taylorsville	1,200
Hall-Kale Mfg. Co., Troutman	3,168
Peck Mfg. Co., Warrenton	4,240
Total	116,324

South Carolina

Arcadia Mills, Arcadia	5,056
Pacific Mills, Columbia	2,156
Alice Mills, Easley	1,992
Alma Mills, Gaffney	4,720
Globe Mfg. Co., Gaffney	500
Graniteville Mfg. Co., Graniteville	764
Jackson Mills, Iva	1,440
Mollohon Mfg Co., Newberry	8,192
Ninety-Six Cotton Mills, Ninety-Six	36,208
Aragon-Baldwin Cotton Mills, Rock Hill	2,240
Arcade Cotton Mills, Rock Hill	896
Carhartt Overall Co., Rock Hill	320
Lonsdale Co., Seneca	20,260
Mills Mill No. 2, Woodruff	6,000
Total	90,244

Tennessee

Dixie Mercerizing Co.	17,000
Total	17,000

Texas

*Bowie Cotton Mills, Bowie	3,328
El Paso Cotton Mills, El Paso	3,000
C. R. Miller Mfg. Co., McKinney	4,988
Total	11,316

SPINDLE INCREASE BY STATES

Alabama	134,928
Arkansas	10,000
Georgia	180,688
Louisiana	5,000
North Carolina	116,324
South Carolina	90,244
Tennessee	17,000
Texas	11,316
Total in South	565,500

*Indicates new mills.

Spindles To Be Installed

The following list shows, by States, spindles reported to be on order for installation in Southern mills during 1928:

Alabama

J. A. Meinhardt Industries, Inc., Anniston	1,456
Opp Cotton Mills, Opp	5,544
Total	7,000

	Spindles
Arkansas	
*Magnolia Cotton Mills, Magnolia	5,000
Total	5,000
Georgia	
Gainesville Cotton Mills, Gainesville	20,000
Harmony Grove Mills, Commerce	10,000
Arnco Mills, Newnan	10,000
Total	40,000
North Carolina	
Acme Spinning Co., Belmont	16,580
Sadie Cotton Mills, Kings Mountain	5,000
Total	21,580
South Carolina	
Appleton Mfg. Co., Anderson	30,000
Clinton Cotton Mills, Clinton	11,000
Slater Mills, Marietta	9,216
Kenneth Mills, Walhalla	2,268
Jackson Mills No. 2, Welford	1,884
Total	54,368
Texas	
Valley Cotton Mills, Harlingen	5,000
Total	5,000

SPINDLES TO BE INSTALLED BY STATES

Alabama	7,000
Arkansas	5,000
Georgia	40,000
North Carolina	21,580
South Carolina	54,368
Texas	5,000
Total for South	132,948

Clark's Annual Loom Increase List

A total of 12,832 additional looms were installed by Southern mills during 1927. The following list gives the name and location of each mill that increased its weaving equipment, together with the total by States and the total for the South. These figures are compiled from Clark's Directory of Southern Textile Mills.

	Looms
Alabama	
Russell Mfg. Co., Alexander City	696
*Stroud-Holcombe Cotton Mills, Birmingham	264
*Connecticut Mills, Decatur	50
West Point Mfg. Co., Fairfax	24
Lincoln Mills, Huntsville	100
Montala Mfg. Co., Montgomery	72
*West Boyleston Mfg. Co., Montgomery	20
Autauga Cotton Mill, Prattville	24
Total	1,250
Arkansas	
*Morrillton Cotton Mills, Morrillton	60
Total	60
Georgia	
Elizabeth Bartlett Mills, Acworth	24
American Textile Co., Atco	514
Athens Mfg. Co., Athens	24
U. S. Penitentiary Duck Mill, Atlanta	40
Goodyear Clearwater Mills, Cedartown	166
Georgia Webbing & Tape Mills, Columbus	2
Lovelace Bros., Columbus	15
Muscogee Mfg. Co., Columbus	248
Eastman Cotton Mills, Eastman	250
*Seaboard Silk Mill, Elberton	216
*Chicopee Mfg. Co., Gainesville	1,000
Gainesville Cotton Mill, Gainesville	500
Elm City Cotton Mills, LaGrange	33
Unity Cotton Mills, LaGrange	28
Milstead Mfg. Co., Milstead	24
Walton Cotton Mills, Monroe	24
*National Dixie Mills, Newnan	50
*Southern Brighton Mills, Shannon	25
Martha Cotton Mills, Thomaston	12
Trion Co., Trion	666
Georgia Mfg. Co., Whitehall	156
Whitehall Yarn Mills, Whitehall	30
Total	4,047
Louisiana	
*L. H. Gilmer Co., Shreveport	36
Total	36
North Carolina	
Balfour Mill, Balfour	80
*Belmont Fabrics Mill, Belmont	150
North Carolina Silk Mills, Burlington	100
Sapona Cotton Mills, Cedar Falls	60
*Lambeth Rope Corp., Charlotte	10
*Pinoca Mills, Charlotte	60
Carl Stohn Co., Charlotte	8
Patterson Mfg. Co., China Grove	54
*Fayette Silk Mills, Fayetteville	100
Vann-Moore Mills, Franklinton	60
*Goldsboro Narrow Fabric Co., Goldsboro	44
Southern Silk Mills, Greensboro	18
White Oak Cotton Mills, Greensboro	118
Stehlisilk Corp., High Point	236
Cannon Mfg. Co., Kannapolis	1,250
*Grimes Silk Mills, Lexington	144
Excell Mills, Lincolnton	32
Rhodes-Rhyne Mfg. Co., Lincolnton	18
Jennings Cotton Mill, Lumberton	168
Entwistle Mfg. Co., Rockingham	200
Grace Cotton Mills, Rutherfordton	140
Kesler Mfg. Co., Salisbury	96
Klumac Mills, Salisbury	48
Lola Mfg. Co., Stanley	6
*Gagner Mfg. Co., Statesville	106
Leward Cotton Mills, Worthville	20
Total	3,326
Oklahoma	
Commander Mills, Inc., Sand Springs	50
Total	50
South Carolina	
Arcadia Mills, Arcadia	200
Victor-Monaghan Co., Arlington	450
Pendleton Mfg. Co., Autun	3
Alice Mills, Easley	108
Alma Mills, Gaffney	58
D. E. Converse Co., Glendale	14
Joanna Cotton Mills, Goldville	16
*Southern Pile Fabric Co., Greenville	24
Jackson Mills, Iva	71
Manetta Mills, Lando	100
Laurens Cotton Mill, Laurens	50
Pacific Mills, Lyman	20
Ninety-Six Cotton Mills, Ninety-Six	833
Lonsdale Co., Seneca	500
Beaumont Mfg. Co., Spartanburg	100
Stark Mills, Tucapau	36
*Dainty Maid Silk Mills, Union	8
*Liberty Fabrics Corp., Union	27
Kenneth Mills, Walhalla	30
Jackson Mills No. 2, Welford	100
Mills Mill No. 2, Woodruff	150
Total	2,898
Tennessee	
Aronsohn & Hirschfield Silk Co.	64
Total	64
Texas	
El Paso Cotton Mills, El Paso	100
Total	100
Virginia	
*Albemarle Weaving Co., Charlottesville	20
*S. & R. Silk Mills, Charlottesville	170
*Schwarzenback-Huber Co., Covington	260
Dan City Silk Mills, Danville	30
*Schwarzenback-Huber Co., Front Royal	225
*Puritan Silk Mill, Grottoes	84

*Indicates new mills.

	Looms
*Virginia Textile Corp., Lynchburg	108
*Martinsville Silk Corp., Martinsville	50
*Lee Weaving Co., Petersburg	54
Total	1,001

LOOMS INCREASE BY STATES

Alabama	1,250
Arkansas	60
Georgia	4,047
Louisiana	36
North Carolina	3,326
Oklahoma	50
South Carolina	2,898
Tennessee	64
Texas	100
Virginia	1,001
Total	12,832

Clark's Annual Knitting Machine Increase List

A total of 7,191 additional knitting machines were installed by Southern knitting mills during the year 1927. The following list gives the name and location of each mill that increased its knitting equipment, together with the total by States and the total for the South. This information is compiled from data from Clark's Directory of Southern Textile Mills:

Alabama

	Knitting Machines
Schwarzenback-Huber Co., Albany	80
Wellman Cotton Mill Co., Athens	138
Cooper, Wells & Co., Decatur	60
W. B. Davis & Son, Fort Payne	130
Scottsboro Hosiery Mill, Scottsboro	50
Tuscaloosa Hosiery Mill, Tuscaloosa	7
Total	465

Florida

*Tampa Knitting Mills, Tampa	19
Total	19

Georgia

*Georgia Knitting Mills, Barnesville	9
The Carroll Mills, Carrollton	3
*Lawler Hosiery Mill, Carrollton	50
Cartersville Mills, Cartersville	3
Westcott Hosiery Mills, Dalton	20
Oak Mfg. Co., East Point	225
Spaulding Knitting Mills, Griffin	57
Newnan Hosiery Mills, Newnan	40
Rome Hosiery Mills, Rome	580
Montgomery Knitting Mills, Summerville	30
Villa Rica Mills, Villa Rica	8
*Villa Rica Mfg. Co., Villa Rica	50
Total	1,075

Kentucky

*Paducah Hosiery Mills, Murray	20
Claussner Hosiery Mills, Paducah	7
Princeton Hosiery Mills, Princeton	65
Total	92

Louisiana

National Hosiery Mills, New Orleans	28
Total	28

Mississippi

D. & W. Hosiery Mills, Meridian	40
Total	40

North Carolina

Cranford Hosiery Mills, Ashboro	55
*McCrary Hosiery Mills, Ashboro	12
*Randolph Silk Hosiery Co., Ashboro	10
Ray Hosiery Mill, Asheville	70
*Bennett Hosiery Mill, Bennett	50
*Burlington Knitting Mills, Burlington	74
*Carolina Knitting Mills, Burlington	80
*East End Hosiery Mill, Burlington	21
Flint Hosiery Co., Burlington	10
*Grace Hosiery Mills, Burlington	88
Keystone Finishing Mills, Burlington	28
*Holt Bros. Knitting Co., Burlington	50
Liberty Hosiery Mills, Burlington	2
Mohawk Hosiery Co., Burlington	30
*Penco Hosiery Mills, Burlington	20
*Pickett Hosiery Mills, Burlington	80
*Rogers Hosiery Mills, Burlington	22
*S. Y. W. Hosiery Mills, Burlington	152
Victory Hosiery Mills, Burlington	35
Hudson Silk Hosiery Co., Charlotte	3
Nebel Knitting Co., Charlotte	10
Claremont Hosiery Mill, Claremont	7
Hoover Hosiery Mills, Concord	20
Better Knit Hosiery Mills, Durham	10
Ruth Hosiery Mills, Durham	20
Louise Knitting Mills, Durham	100
Elizabeth City Hosiery Co., Elizabeth City	77
*Virginia Dare Hosiery Mills, Elizabeth City	30
*Emory & Seagroves Mill, Durham	26
*Mock-Judson-Voehringer Co., Greensboro	36
Juvenile Hosiery Mills, Greensboro	30
Haw Hosiery Mills, Haw River	4
Riverside Hosiery Mills, Haw River	20
McKenney Hosiery Mills, Henderson	10
Elliott Knitting Mills, Hickory	100
Hickory Hosiery Mills, Hickory	75
Hollar Hosiery Mills, Hickory	40
*Longview Hosiery Mills, Hickory	80
Pearl Knitting Mills, Hickory	35
Amos Hosiery Mills, High Point	110
Commonwealth Hosiery Mills, High Point	45
Crown Hosiery Mill, High Point	25
Guilford Hosiery Mill, High Point	25
*O. E. Kearns & Son, High Point	200
Melrose Hosiery Mills, High Point	112
Piedmont Mills Co., High Point	100
Robbins Knitting Co., High Point	75
J. A. Cline & Co., Hildebran	28
Kernersville Knitting Co., Kernersville	110
*Welborn Mills, Inc., Lexington	50
*Dependable Hosiery Mills, Inc., Liberty	41
Elizabeth James Knitting Mill, Marion	78
*Wyrick Hosiery Mills, Mebane	40
*Morganton Full Fashion Hosiery Co., Morganton	15
*Argonne Hosiery Mills, Mt. Airy	50
Mt. Airy Knitting Co., Mt. Airy	13
Wilkes Hosiery Mills, North Wilkesboro	65
*Phoenix Mills, Inc., Statesville	200
*Girard Hosiery Mills, Thomasville	90
Maurice Mills, Thomasville	35
McDonald-Heathcote, Inc., Thomasville	10
Ragan Knitting Co., Thomasville	41
Martinat Mills, Valdese	25
*West Knitting Co., Wadesboro	60
Wendell Hosiery Mills, Wendell	6
Hanes Hosiery Mills, Winston-Salem	200
Total	3,571

South Carolina

Apalache Hosiery Mill, Landrum	48
*Excelsior Mills, Landrum	40
*Roseknit Hosiery Co., Sumter	32
Total	120

Tennessee

*Warwick Mills, Athens	42
Browning Hosiery Mills, Chattanooga	40
Davenport Hosiery Mills, Chattanooga	100
McAllister Hosiery Mills, Chattanooga	220
Mountain City Knitting Mills, Chattanooga	12
Smith Hosiery Mills Co., Chattanooga	47
Watkins Hosiery Mills, Chattanooga	5
*Debonair Hosiery Mills, Cleveland	200
Kingsport Hosiery Mills, Kingsport	52
Ashe Hosiery Mills, Knoxville	65
Holston Mfg. Co., Knoxville	55
Standard Knitting Mills, Knoxville	10
*Alspack Knitting Co., Lenoir City	8
Ideal Hosiery Mills, Maryville	20
Read Hosiery Mill, McMinnville	40
*Nashville Knitting Mills, Nashville	10

*Indicates new mills.

(Continued on Page 64)

Statistics Enable Mills to Adapt Production to Demand

By Walker D. Hines, President, The Cotton-Textile Institute, Inc.

One of the most vital matters bearing upon the welfare of the cotton mills is the obtaining of adequate statistics and the intelligent using of those statistics when obtained.

It goes without saying that it is impossible at the present time for the cotton textile industry to market at all times of the year all the goods which the industry can produce. It follows, therefore, that at sometimes of the year there must be substantial reductions in production so that, in the long run, the production will match the demand. It is well known that the moment an overproduction begins to develop the buyers begin to avail themselves of that condition to break down the prices, with the result that prices

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are frequently brought below the normal cost of production.

With these factors always facing the mills, one of the simplest and most obvious conclusions it that it is wise for the mills to adapt their production to the demand. In that way they can avoid seeing their prices forced down below cost through the influence of surplus goods hanging over the market. This means an orderly adaptation of production in a manner which will not be destructive to the mills. If the mills do not resort to this orderly and appropriate method of handling their business, they will not thereby escape the necessity for reducing production when the demand falls off, but they will merely put themselves in a position where they will nevertheless have to reduce production at a later time under far less favorable conditions In other words, they will substitute a disorderly reduction of production, at the wrong time and in the most costly manner, for an orderly reduction made effective in a timely and reasonable manner.

The advantage of an orderly adaptation of production to demand extends to all other interests identified with the cotton industry, and in fact extends to the public itself, because such a method operates in favor of reasonable stabilization. No branch of the public can be benefitted in the long run by creating from time to time conditions of pronounced instability as to prices of cotton goods, and yet these are brought about by unwillingness to the very conditions which are readjust production in accordance with the inevitable changes in demand.

I am glad to say that I believe these principles are far better understood by the industry in general than they ever have been before and I believe the better appreciation of these factors will react directly in the public interest. We have seen recently large numbers of narrow sheetings and print cloth mills actually putting into effect moderate reduction in their production for the purpose of bringing their production into line with the reduced demand. We have seen indications of similar purposes on the part of numerous mills in other groups, such as the carded yarn group and the chambray group.

The ability to measure the relationship of demand and supply is afforded by the statistics of production, unfilled orders, and stocks. These figures have been supplied to an important extent for nearly three years by the Association of Cotton Textile Merchants at New York. After the formation of the Institute, it was able to add to these figures and enlarge them to a considerable extent, and thereby make them much more useful for the guidance of the mills.

It is a great satisfaction to me that I have had the staunch support of the Southern Textile Bulletin in preaching this doctrine of reasonable and timely adaptation of production to demand and I am glad to have this opportunity to emphasize in its columns the continuing importance of this vital principle and its essential relationship to that reasonable stability of conditions which must underlie the continued prosperity of the cotton textile industry and of all the interests identified with it, reaching all the way from the grower of the cotton to the ultimate distributor of the cotton goods.

Fall River Cuts Wages 10 Per Cent.

Fall River, Mass.—General wage reduction in textile mills amounting to 10 per cent and effective January 30 was announced Friday following a conference of the Fall River Cotton Manufacturers Association and the Fall River Textile Council.

It was declared further, that the manufacturers could not guarantee steady employment, as has been stipulated by workers in the event that they accepted the wage reduction.

Pop wants a rebate

Study of Spindle Hours

Since August, 1921, the Census Bureau of the United States Department of Commerce has been publishing each month vital statistics relative to cotton spindles and their operations.

They have given the cotton spindles in place, spindles active, total spindle hours for the month, average hours per spindle and the working days in the month.

It is well known that total spindles in place have been decreased since 1921 and yet spindle hours have increased by reason of night operations.

In order that a study might be made of the subject, we have tabulated and give below the spindle figures for four Southern and three Northern States, for Southern States as a whole, for New England and all States other than those of the South and for the United States as a whole.

We advise a careful study of these statistics, as they have a vital bearing upon the lack of prosperity in the cotton manufacturing industry.

United States

	Spindles in Place	Active Spindles	Idle Spindles	Active Spindle Hrs.	Av. Hrs. Per Spindle in Place	Working Days
Aug., 1921	.....	33,617,584	.....	7,319,916,931	...	27
Sept., 1921	.....	33,898,415	.....	7,379,408,671	218	25
Oct., 1921	.....	34,221,646	.....	7,583,342,519	222	25½
Nov., 1921	36,697,846	34,486,669	2,211,176	7,689,258,490	210	24½
Dec., 1921	36,724,996	34,485,341	2,239,655	7,725,727,609	210	26
Jan., 1922	36,843,011	34,457,509	2,385,502	7,931,518,136	215	25½
Feb., 1922	36,879,953	33,797,329	3,082,624	7,119,576,600	193	23 2–3
Mch., 1922	36,870,544	31,874,496	4,996,048	7,779,380,703	211	27
Apr., 1922	36,884,936	31,389,256	5,495,680	6,635,666,969	180	24 2–3
May, 1922	36,884,133	31,653,061	5,231,072	7,493,491,601	203	26½
June, 1922	36,900,924	31,877,015	5,023,909	7,646,304,949	207	26
July, 1922	36,943,042	31,975,269	4,967,773	7,044,957,625	191	25
Aug., 1922	36,965,230	32,499,324	4,465,906	8,033,002,129	217	27
Sept., 1922	37,075,407	33,296,513	3,778,894	7,760,863,470	209	25½
Oct., 1922	37,128,659	33,859,076	3,269,583	8,289,885,446	223	25¾
Nov., 1922	37,175,233	34,664,630	2,510,603	8,710,224,794	234	25½
Dec., 1922	37,204,197	34,968,440	2,235,757	8,228,298,384	221	25
Jan., 1923	37,225,419	35,240,853	1,984,566	9,266,299,904	249	26½
Feb., 1923	37,276,302	35,307,707	1,968,595	8,449,376,685	227	23 2–3
Mch., 1923	37,308,713	35,500,518	1,808,195	9,531,002,951	255	27
Apr., 1923	37,287,265	35,515,791	1,771,474	8,787,443,897	236	24 2-3
May, 1923	37,334,021	35,390,137	1,943,884	9,309,093,873	249	26½
June, 1923	37,374,876	34,843,421	2,531,455	8,384,558,582	224	26
July, 1923	37,397,331	34,237,887	3,159,444	7,135,765,590	191	25
Aug., 1923	37,430,195	33,708,667	3,721,528	7,569,061,615	202	27
Sept., 1923	37,491,706	33,929,885	3,561,821	7,482,060,995	200	24½
Oct., 1923	37,550,250	34,378,662	3,171,588	8,381,836,213	223	26¾
Nov., 1923	37,585,049	34,101,452	3,483,597	8,014,579,167	213	25½
Dec., 1923	37,635,709	34,044,870	3,590,839	7,139,371,847	190	25
Jan., 1924	37,740,454	33,339,806	4,400,648	8,448,247,467	224	26½
Feb., 1924	37,742,143	32,683,786	5,058,357	7,304,102,954	194	24 2-3
Mch., 1924	37,761,970	32,392,171	5,369,799	7,072,965,368	187	26
Apr., 1924	37,745,967	31,871,665	5,874,302	6,769,711,331	179	25 2–3
May, 1924	37,784,690	30,493,165	7,291,522	5,907,670,026	156	26½
June, 1924	37,803,946	29,216,486	8,587,460	5,336,401,848	141	25
July, 1924	37,786,464	28,710,359	9,076,105	5,157,779,726	136	26
Aug., 1924	37,822,706	28,945,603	8,877,103	5,399,549,661	143	26
Sept., 1924	37,840,731	30,122,384	7,718,347	6,414,902,010	170	25½
Oct., 1924	37,833,252	31,078,804	6,754,448	7,592,569,221	201	26¾
Nov., 1924	37,845,140	31,789,876	6,055,264	7,123,959,034	188	24½
Dec., 1924	37,885,538	32,661,949	5,223,589	7,816,590,215	206	26
Jan., 1925	37,866,066	33,180,758	4,685,308	8,493,240,466	224	26½
Feb., 1925	37,875,960	33,277,189	4,598,771	7,868,113,831	208	23 2–3
Mch., 1925	37,809,876	33,225,182	4,584,694	8,599,440,113	227	26
Apr., 1925	37,804,654	33,412,650	4,392,004	8,518,142,398	225	25 2-3
May, 1925	37,835,708	33,147,632	4,688,076	7,929,605,719	210	25½
June, 1925	37,858,211	32,309,896	5,548,315	7,690,315,823	203	26
July, 1925	37,936,784	31,760,596	6,176,188	7,297,648,494	192	26
Aug., 1925	37,822,040	31,269,774	6,552,266	6,954,443,849	184	26
Sept., 1925	37,864,912	31,551,630	6,313,282	7,102,429,980	188	25½
Oct., 1925	37,905,330	32,425,206	5,480,124	7,961,670,919	210	26¾
Nov., 1925	37,919,358	32,892,324	5,027,034	7,833,792,613	207	24½
Dec., 1925	37,885,488	33,000,874	4,884,614	8,271,576,487	218	25
Jan., 1926	37,843,844	32,803,156	5,040,688	8,358,813,620	221	25½
Feb., 1926	37,877,376	33,022,966	4,854,410	8,093,544,968	214	23 2–3
Mch., 1926	37,858,146	33,233,382	4,624,764	9,163,305,890	242	27
Apr., 1926	37,725,744	32,893,042	4,832,702	8,347,811,947	221	25 2–3
May, 1926	37,700,136	32,267,410	5,432,726	7,505,896,215	199	25½
June, 1926	37,694,680	31,770,900	5,923,780	7,606,123,260	202	26
July, 1926	37,584,534	31,082,482	6,502,052	6,770,297,539	180	26
Aug., 1926	37,524,888	31,321,936	6,202,952	7,489,366,898	200	26
Sept., 1926	37,413,598	32,134,682	5,278,916	8,247,975,101	220	25½
Oct., 1926	37,428,398	32,592,806	4,835,592	8,369,684,073	224	25¾
Nov., 1926	37,426,048	32,586,770	4,839,278	8,480,410,447	227	25½
Dec., 1926	37,404,472	32,496,250	4,908,222	8,563,136,989	229	26
Jan., 1927	37,373,992	32,633,550	4,740,442	8,558,066,401	229	25½
Feb., 1927	37,244,888	32,872,102	4,372,786	8,266,211,131	222	23 2–3
Mch., 1927	37,035,710	32,919,288	4,116,422	9,628,990,121	260	27
Apr., 1927	36,943,340	32,892,442	4,050,898	8,804,518,361	238	25 2–3
May, 1927	36,874,608	32,906,580	3,968,028	9,001,712,285	244	25½
June, 1927	36,875,872	32,753,428	4,122,444	9,191,907,036	249	26
July, 1927	36,728,086	32,311,802	4,416,284	8,042,790,747	219	25 1–6
Aug., 1927	36,556,026	32,239,246	4,316,780	8,973,455,525	245	27
Sept., 1927	36,562,232	32,343,454	4,218,778	8,761,346,598	240	25½
Oct., 1927	36,548,808	32,497,504	4,051,304	8,704,511,019	238	25¾
Nov., 1927	36,536,512	32,269,478	4,267,034	8,680,217,297	238	25¼
Dec., 1927	36,491,000	31,715,000	4,779,000	7,859,362,000	215	25

Southern States

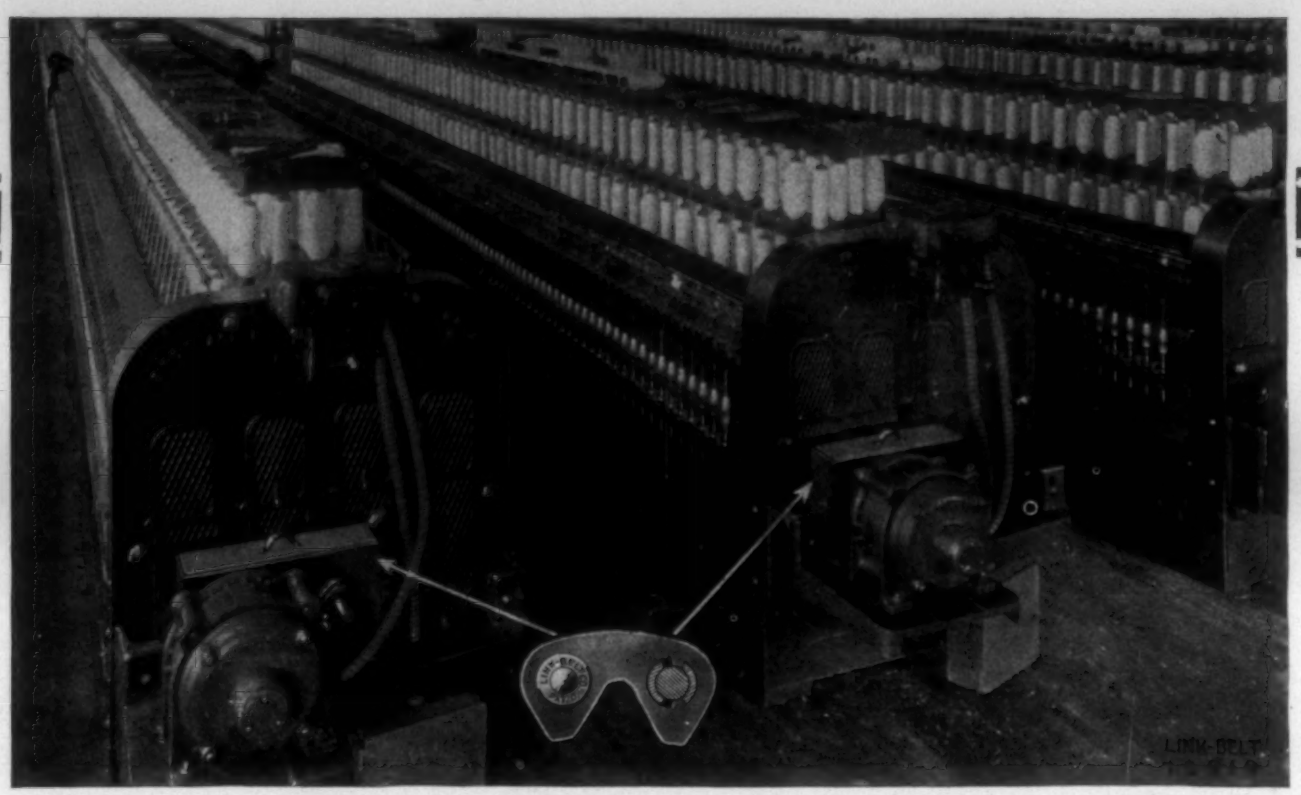
	Spindles in Place	Active Spindles	Idle Spindles	Active Spindle Hrs.	Av. Hrs. Per Spindle in Place	Working Days
Aug., 1921	.....	.....	.....	.....	...	27
Sept., 1921	.....	15,338,584	.....	3,770,725,945	245	25
Oct., 1921	.....	15,405,212	.....	3,830,504,632	249	25½
Nov., 1921	15,946,473	15,507,659	438,814	4,023,020,221	252	24½
Dec., 1921	15,949,257	15,512,028	437,229	3,817,566,103	239	26
Jan., 1922	16,031,918	15,650,718	381,200	4,196,212,497	262	25½
Feb., 1922	16,066,510	15,673,771	392,739	3,880,837,458	242	23 2–3
Mch., 1922	16,056,096	15,556,570	499,526	4,258,216,241	265	27
Apr., 1922	16,049,305	15,504,463	544,842	3,799,578,809	237	24 2–3
May, 1922	16,055,051	15,530,285	524,766	4,252,386,950	265	26½
June, 1922	16,058,629	15,533,332	525,297	4,275,790,701	266	26
July, 1922	16,070,413	15,583,903	486,510	4,019,646,862	250	25
Aug., 1922	16,078,534	15,613,632	464,902	4,399,873,166	274	27
Sept., 1922	16,094,073	15,724,568	369,505	4,338,056,582	270	25½
Oct., 1922	16,125,387	15,831,959	293,428	4,577,464,015	284	25¾
Nov., 1922	16,157,559	15,859,962	297,597	4,685,995,143	290	25½
Dec., 1922	16,172,051	15,856,774	316,277	4,238,181,322	262	25
Jan., 1923	16,229,545	15,966,294	263,251	4,980,072,640	307	26½
Feb., 1923	16,274,272	16,034,743	239,529	4,573,167,364	281	23 2–3
Mch., 1923	16,313,156	16,065,554	247,602	5,116,534,762	314	27
Apr., 1923	16,326,754	16,072,152	254,602	4,808,775,761	295	24 2–3
May, 1923	16,352,657	16,089,463	263,194	5,120,875,506	313	26½
June, 1923	16,397,563	16,009,615	387,948	4,702,488,679	287	26
July, 1923	16,446,758	15,871,805	575,953	4,185,228,973	254	25
Aug., 1923	16,483,657	15,858,075	625,582	4,478,136,766	272	27
Sept., 1923	16,560,409	16,011,049	549,360	4,397,323,767	266	24½
Oct., 1923	16,638,075	16,084,942	553,133	4,809,617,872	289	26¾
Nov., 1923	16,688,957	16,152,382	536,575	4,643,228,818	278	25½
Dec., 1923	16,747,046	16,254,183	492,863	4,067,109,646	243	25
Jan., 1924	16,812,906	16,346,206	466,700	5,121,637,404	305	26½
Feb., 1924	16,849,641	16,269,204	580,437	4,422,887,331	262	24 2–3
Mch., 1924	16,926,488	16,184,814	741,674	4,315,892,680	255	26
Apr., 1924	16,999,049	16,113,421	885,628	4,128,987,028	243	25 2–3
May, 1924	17,069,830	15,784,301	1,284,529	3,742,570,704	219	26½
June, 1924	17,120,902	15,582,725	1,538,177	3,393,850,506	198	25
July, 1924	17,216,694	15,392,664	1,824,030	3,298,668,278	192	26
Aug., 1924	17,257,434	15,293,911	1,963,523	3,343,736,588	194	26
Sept., 1924	17,297,101	15,962,640	1,334,461	4,071,700,618	235	25½
Oct., 1924	17,301,374	16,463,988	837,386	4,825,357,705	279	26¾
Nov., 1924	17,307,998	16,682,076	625,922	4,568,514,449	264	24½
Dec., 1924	17,359,420	16,785,629	573,791	4,624,716,928	266	26
Jan., 1925	17,406,314	16,965,378	540,946	5,230,841,629	301	26½
Feb., 1925	17,420,952	16,995,783	425,169	4,779,488,127	274	23 2–3
Mch., 1925	17,431,118	16,926,512	504,606	5,170,777,681	297	26
Apr., 1925	17,457,918	16,926,656	531,262	5,131,160,059	294	25 2–3
May, 1925	17,486,736	16,872,364	614,372	4,836,613,270	277	25½
June, 1925	17,522,025	16,757,892	764,133	4,730,230,601	270	26
July, 1925	17,635,132	16,575,778	1,059,354	4,485,170,552	254	26
Aug., 1925	17,633,010	16,479,272	1,153,738	4,297,033,825	244	26
Sept., 1925	17,659,356	16,653,624	1,005,732	4,388,209,080	248	25½
Oct., 1925	17,706,506	16,890,532	815,974	4,770,283,192	269	26¾
Nov., 1925	17,723,356	17,107,692	615,664	4,883,505,651	276	24½
Dec., 1925	17,751,376	17,191,442	559,931	5,097,347,827	287	25
Jan., 1926	17,755,688	17,176,666	579,022	5,291,505,547	298	25½
Feb., 1926	17,780,302	17,221,236	559,066	5,049,579,611	284	23 2–3
Mch., 1926	17,842,104	17,266,762	575,342	5,636,087,198	316	27
Apr., 1926	17,855,458	17,251,220	604,238	5,226,572,739	293	25 2–3
May, 1926	17,847,586	17,048,474	799,112	4,667,461,847	262	25½
June, 1926	17,864,844	17,007,458	857,386	4,781,456,006	268	26
July, 1926	17,877,118	16,931,110	946,008	4,445,543,798	249	26
Aug., 1926	17,878,650	16,964,426	914,224	4,867,929,378	272	26
Sept., 1926	17,882,130	17,145,328	736,802	5,323,958,627	298	25½
Oct., 1926	17,897,134	17,313,622	583,512	5,309,859,453	297	25¾
Nov., 1926	17,931,132	17,391,290	539,842	5,500,997,434	307	25½
Dec., 1926	17,936,264	17,395,284	540,980	5,404,787,979	301	26
Jan., 1927	18,016,726	17,482,426	534,300	5,507,425,034	306	25½
Feb., 1927	18,042,196	17,545,358	496,838	5,295,420,704	294	23 2–3
Mch., 1927	18,075,138	17,596,644	488,494	6,099,379,075	337	27
Apr., 1927	18,125,989	17,672,178	463,811	5,654,797,564	312	25 2–3
May, 1927	18,158,432	17,685,944	472,488	5,796,861,611	319	25½
June, 1927	18,166,710	17,666,610	500,100	5,852,701,259	322	26
July, 1927	18,201,096	17,642,754	558,342	5,285,153,922	290	25 1–6
Aug., 1927	18,206,928	17,650,760	556,168	5,928,092,928	326	27
Sept., 1927	18,228,592	17,725,348	503,244	5,796,140,201	318	25½
Oct., 1927	18,225,780	17,770,442	455,338	5,696,336,070	312	25¾
Nov., 1927	18,381,294	17,877,478	503,816	5,824,476,733	317	25¼
Dec., 1927	18,399,000	17,891,000	508,000	5,193,457,000	212	25

New England States

(Including All Others Except Southern States)

	Spindles in Place	Active Spindles	Idle Spindles	Active Spindle Hrs.	Av. Hrs. Per Spindle in Place	Working Days
Aug., 1921	.....	.....	.....	.....	...	27
Sept., 1921	.....	18,559,831	.....	3,608,682,726	194	25
Oct., 1921	.....	18,816,434	.....	3,752,837,887	199	25½
Nov., 1921	20,751,373	18,979,010	1,772,363	3,666,238,269	177	24½
Dec., 1921	20,775,739	18,973,313	1,802,426	3,908,161,506	188	26
Jan., 1922	20,811,093	18,806,791	2,004,302	3,735,305,639	179	25½
Feb., 1922	20,813,443	18,123,558	2,689,885	3,238,739,142	156	23 2–3
Mch., 1922	20,814,448	16,317,926	4,496,522	3,521,134,462	169	27
Apr., 1922	20,835,631	15,884,793	4,950,838	2,836,088,160	136	24 2–3
May, 1922	20,829,082	16,122,776	4,706,306	3,241,104,651	156	26½
June, 1922	20,842,295	16,343,683	4,498,612	3,370,514,248	162	26
July, 1922	20,872,629	16,391,366	4,481,263	3,025,310,763	145	25
Aug., 1922	20,886,696	16,885,692	4,001,004	3,633,128,963	174	27
Sept., 1922	20,981,334	17,571,945	3,409,389	3,422,806,888	163	25½
Oct., 1922	21,003,272	18,027,117	2,976,155	3,712,421,431	177	25¾
Nov., 1922	21,017,674	18,804,668	2,213,006	4,024,229,651	191	25½
Dec., 1922	21,032,146	19,111,666	1,920,480	3,990,117,062	190	25
Jan., 1923	20,995,874	19,274,559	1,721,315	4,286,227,264	204	26½
Feb., 1923	21,002,050	19,272,964	1,729,066	3,876,309,321	185	23 2–3
Mch., 1923	20,995,557	19,434,964	1,560,593	4,414,468,189	210	27
Apr., 1923	20,960,511	19,443,639	1,516,872	3,978,668,136	190	24 2–3
May, 1923	20,981,364	19,300,674	1,680,690	4,188,218,367	200	26½
June, 1923	20,977,313	18,833,806	2,143,507	3,682,069,903	176	26
July, 1923	20,950,573	18,366,082	2,584,491	2,950,536,617	141	25
Aug., 1923	20,946,538	17,850,592	3,095,946	3,090,924,849	148	27
Sept., 1923	20,931,297	17,918,836	3,012,461	3,084,737,228	147	24½
Oct., 1923	20,912,175	18,293,720	2,618,455	3,572,268,341	171	26¾
Nov., 1923	20,896,092	17,949,070	2,947,022	3,371,350,349	161	25½
Dec., 1923	20,888,663	17,790,687	3,097,976	3,072,262,201	147	25
Jan., 1924	20,927,548	16,993,600	3,933,948	3,326,610,063	159	26½
Feb., 1924	20,892,502	16,414,582	4,477,920	2,881,215,623	133	24 2–3
Mch., 1924	20,835,482	16,207,357	4,628,125	2,757,072,688	132	26
Apr., 1924	20,746,918	15,758,244	4,988,674	2,640,724,303	127	25 2–3
May, 1924	20,714,860	14,708,864	6,005,996	2,165,099,322	105	26½
June, 1924	20,683,044	13,633,761	7,049,283	1,942,551,342	94	25

(Continued on Page 18)



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There are 200 drives in use in this mill.

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CONSIDERED as a basis for buying, there is a vast difference between promise and performance, between theory and practice, between manufacturers' claims and users' experience.

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LINK-BELT
SILENT CHAIN DRIVES

Study of Spindle Hours

(Continued from Page 16)

	Spindles in Place	Active Spindles	Idle Spindles	Active Spindle Hrs.	Av. Hrs. Per Spindle in Place	Working Days
July, 1924	20,569,770	13,317,695	7,252,075	1,859,111,448	90	26
Aug., 1924	20,565,272	13,651,692	6,913,580	2,055,813,073	100	26
Sept., 1924	20,543,630	14,159,744	6,383,886	2,343,201,392	114	25½
Oct., 1924	20,531,878	14,614,816	5,917,062	2,767,211,516	135	26¾
Nov., 1924	20,537,142	15,107,800	5,429,342	2,555,444,585	124	24½
Dec., 1924	20,526,118	15,876,320	4,649,798	3,191,873,287	155	26
Jan., 1925	20,459,752	16,215,380	4,244,372	3,262,398,837	159	26½
Feb., 1925	20,455,008	16,281,406	4,173,602	3,088,625,704	151	23 2–3
Mch., 1925	20,378,758	16,298,670	4,080,088	3,428,662,432	168	26
Apr., 1925	20,346,736	16,449,994	3,896,742	3,386,982,339	166	25 2–3
May, 1925	20,348,972	16,275,268	4,073,704	3,092,992,449	152	25½
June, 1925	20,336,186	15,552,004	4,784,182	2,960,085,222	146	26
July, 1925	20,301,652	15,184,818	5,116,834	2,812,477,942	139	26
Aug., 1925	20,189,030	14,790,502	5,398,528	2,657,310,024	132	26
Sept., 1925	20,205,556	14,898,006	5,307,550	2,714,220,900	134	25½
Oct., 1925	20,198,824	15,534,674	4,664,150	3,191,387,727	158	26¾
Nov., 1925	20,196,002	15,784,632	4,411,370	2,950,286,962	141	24½
Dec., 1925	20,134,112	15,809,432	4,324,680	3,174,228,660	158	25
Jan., 1926	20,088,156	15,626,490	4,461,666	3,067,308,073	153	25½
Feb., 1926	20,097,074	15,807,730	4,289,344	3,043,965,357	151	23 2–3
Mch., 1926	20,016,042	15,966,620	4,049,422	3,527,218,692	176	27
Apr., 1926	19,870,286	15,641,822	4,228,464	3,121,239,208	157	25 2–3
May, 1926	19,852,550	15,218,936	4,633,614	2,838,434,368	143	25½
June, 1926	19,829,836	14,763,442	5,066,394	2,824,667,254	143	26
July, 1926	19,707,416	14,151,372	5,556,044	2,324,754,141	118	26
Aug., 1926	19,646,238	14,357,510	5,288,728	2,621,437,520	133	26
Sept., 1926	19,531,468	14,989,354	4,542,114	2,924,016,474	149	25½
Oct., 1926	19,531,264	15,279,184	4,252,080	3,059,824,620	157	25¾
Nov., 1926	19,494,916	15,195,480	4,299,436	2,979,413,013	153	25½
Dec., 1926	19,468,208	15,100,966	4,367,242	3,158,349,101	162	26
Jan., 1927	19,357,266	15,151,124	4,206,142	3,050,641,367	158	25½
Feb., 1927	19,202,692	15,326,744	3,875,948	2,970,790,427	154	23 2–3
Mch., 1927	18,960,572	15,322,644	3,637,928	3,529,611,046	186	27
Apr., 1927	18,807,351	15,220,264	3,587,087	3,149,720,797	167	25 2–3
May, 1927	18,716,176	15,220,636	3,495,540	3,204,850,674	171	25½
June, 1927	18,709,162	15,086,818	3,622,344	3,338,205,777	178	26
July, 1927	18,526,990	14,669,048	3,857,942	2,757,636,825	148	25 1–6
Aug., 1927	18,349,098	14,588,486	3,760,612	3,045,362,597	166	27
Sept., 1927	18,333,640	14,618,106	3,715,534	2,965,206,397	162	25½
Oct., 1927	18,293,028	14,727,062	3,565,966	3,008,174,949	164	25¾
Nov., 1927	18,155,218	14,392,000	3,763,218	2,855,740,564	157	25¼
Dec., 1927	18,094,664	13,824,118	4,270,546	2,665,906,137	156	25

Alabama

	Spindles in Place	Active Spindles	Idle Spindles	Active Spindle Hrs.	Av. Hrs. Per Spindle in Place	Working Days
Aug., 1921	.....	1,283,096	.....	312,426,686	...	27
Sept., 1921	.....	1,286,620	.....	291,812,192	231	25
Oct., 1921	.....	1,247,395	.....	293,611,022	235	25½
Nov., 1921	1,292,392	1,254,947	37,445	312,092,456	241	24½
Dec., 1921	1,295,480	1,232,569	62,911	273,987,575	211	26
Jan., 1922	1,295,542	1,229,480	66,062	324,851,605	251	25½
Feb., 1922	1,296,101	1,205,143	90,958	291,093,181	225	23 2–3
Mch., 1922	1,299,290	1,208,528	90,762	314,605,003	242	27
Apr., 1922	1,299,493	1,207,102	92,391	289,994,461	223	24 2–3
May, 1922	1,299,830	1,213,294	86,536	325,717,838	251	26½
June, 1922	1,301,699	1,212,514	89,185	317,202,145	244	26
July, 1922	1,300,701	1,216,801	83,900	327,573,449	252	25
Aug., 1922	1,300,582	1,213,460	87,122	331,517,065	255	27
Sept., 1922	1,300,031	1,227,713	72,318	333,072,512	256	25½
Oct., 1922	1,302,794	1,236,540	66,254	340,670,087	261	25¾
Nov., 1922	1,312,945	1,245,397	67,548	355,055,995	274	25½
Dec., 1922	1,310,144	1,248,718	61,426	327,941,127	250	25
Jan., 1923	1,315,020	1,256,825	58,195	381,032,753	290	26½
Feb., 1923	1,314,452	1,277,607	36,845	353,702,791	269	23 2–3
Mch., 1923	1,328,602	1,271,365	57,237	386,629,258	291	27
Apr., 1923	1,326,148	1,274,717	51,431	373,265,721	281	24 2–3
May, 1923	1,326,072	1,288,147	37,925	387,984,596	293	26½
June, 1923	1,326,828	1,273,847	52,981	356,043,201	268	26
July, 1923	1,330,162	1,248,062	82,100	303,908,972	228	25
Aug., 1923	1,328,584	1,233,900	94,684	338,753,592	255	27
Sept., 1923	1,328,756	1,254,734	74,022	325,687,990	245	24½
Oct., 1923	1,327,909	1,262,157	65,752	362,605,535	273	26¾
Nov., 1923	1,330,283	1,273,844	56,439	367,087,535	276	25½
Dec., 1923	1,330,579	1,267,854	62,725	306,503,405	230	25
Jan., 1924	1,334,042	1,286,527	47,515	393,870,555	295	26½
Feb., 1924	1,334,132	1,275,826	58,306	334,152,864	250	24 2–3
Mch., 1924	1,376,705	1,293,904	82,801	332,745,771	242	26
Apr., 1924	1,381,555	1,262,124	119,431	319,203,687	231	25 2–3
May, 1924	1,389,657	1,257,099	132,558	320,901,372	231	26½
June, 1924	1,388,926	1,237,640	151,286	296,820,547	214	25
July, 1924	1,390,278	1,212,880	177,398	265,984,711	191	26
Aug., 1924	1,390,774	1,240,034	150,740	251,485,429	181	26
Sept., 1924	1,391,305	1,270,644	120,661	312,795,509	225	25½
Oct., 1924	1,391,275	1,319,051	72,224	284,272,061	276	26¾
Nov., 1924	1,391,508	1,326,840	64,668	355,512,484	255	24½
Dec., 1924	1,390,310	1,327,588	62,722	373,902,599	269	26
Jan., 1925	1,399,989	1,342,052	57,937	401,951,810	287	26½
Feb., 1925	1,410,391	1,372,460	37,931	365,275,446	259	23 2–3
Mch., 1925	1,420,498	1,375,732	44,766	391,474,324	276	26
Apr., 1925	1,430,654	1,405,656	24,998	402,550,446	281	25 2–3
May, 1925	1,432,538	1,394,620	37,918	371,751,543	260	25½
June, 1925	1,434,510	1,385,496	49,014	364,479,689	254	26
July, 1925	1,431,868	1,360,358	71,510	339,554,496	237	26
Aug., 1925	1,433,968	1,371,110	62,858	358,727,435	250	26
Sept., 1925	1,435,404	1,391,762	43,642	405,228,633	282	25½
Oct., 1925	1,437,114	1,408,074	29,040	421,638,145	293	26¾
Nov., 1925	1,437,880	1,410,246	27,634	412,189,850	287	24½
Dec., 1925	1,438,114	1,411,810	26,304	426,273,299	296	25
Jan., 1926	1,439,634	1,408,426	31,208	417,816,252	290	25½
Feb., 1926	1,440,900	1,408,542	32,358	398,308,951	276	23 2–3
Mch., 1926	1,449,610	1,418,044	31,566	447,378,397	309	27
Apr., 1926	1,455,614	1,427,068	28,546	412,110,174	283	25 2–3
May, 1926	1,452,954	1,424,654	28,300	385,545,146	265	25½
June, 1926	1,462,796	1,421,812	40,984	380,894,696	260	26
July, 1926	1,470,016	1,421,296	48,720	324,036,412	220	26
Aug., 1926	1,460,894	1,409,086	51,808	373,358,790	256	26
Sept., 1926	1,468,042	1,418,810	49,232	402,496,466	274	25½
Oct., 1926	1,472,462	1,433,060	39,402	420,315,789	285	25¾
Nov., 1926	1,484,674	1,441,958	42,716	428,193,994	282	25½
Dec., 1926	1,484,666	1,440,298	44,368	433,213,383	292	26
Jan., 1927	1,506,448	1,451,882	54,566	424,083,696	282	25½
Feb., 1927	1,506,422	1,456,168	50,254	400,360,735	266	23 2–3
Mch., 1927	1,507,124	1,460,488	46,636	471,764,331	313	27
Apr., 1927	1,511,130	1,463,218	47,912	429,243,513	281	25 2–3
May, 1927	1,516,642	1,467,614	49,028	448,252,334	296	25½
June, 1927	1,515,118	1,470,782	44,336	456,260,275	301	26
July, 1927	1,527,298	1,463,924	63,374	392,556,123	257	25 1–6
Aug., 1927	1,534,698	1,486,836	47,862	468,680,485	305	27
Sept., 1927	1,541,022	1,496,336	44,686	446,198,850	290	25½
Oct., 1927	1,539,146	1,487,108	52,038	448,177,441	291	25¾
Nov., 1927	1,590,842	1,511,348	79,494	460,860,995	290	25¼
Dec., 1927	1,590,842	1,513,000	77,842	395,526,000	249	25

Georgia

	Spindles in Place	Active Spindles	Idle Spindles	Active Spindle Hrs.	Av. Hrs. Per Spindle in Place	Working Days
Aug., 1921	.....	2,648,325	.....	585,959,068	...	27
Sept., 1921	.....	2,470,175	.....	565,475,424	229	25
Oct., 1921	.....	2,502,888	.....	592,113,312	237	25½
Nov., 1921	2,668,467	2,473,824	194,643	607,860,036	228	24½
Dec., 1921	2,669,227	2,489,665	179,562	596,000,268	223	26
Jan., 1922	2,678,486	2,529,288	149,198	634,610,780	237	25½
Feb., 1922	2,677,048	2,517,813	159,235	577,082,815	216	23 2–3
Mch., 1922	2,679,403	2,522,314	157,089	665,861,955	249	27
Apr., 1922	2,678,797	2,527,337	151,460	602,910,914	225	24 2–3
May, 1922	2,686,349	2,496,372	189,977	653,797,035	243	26½
June, 1922	2,689,051	2,504,160	184,891	658,338,285	245	26
July, 1922	2,683,566	2,533,176	150,390	636,925,044	237	25
Aug., 1922	2,689,540	2,557,842	131,698	737,435,485	274	27
Sept., 1922	2,687,078	2,609,747	77,331	716,230,316	267	25½
Oct., 1922	2,713,013	2,655,753	57,260	769,026,272	283	25¾
Nov., 1922	2,690,038	2,629,660	60,378	801,146,797	298	25½
Dec., 1922	2,688,228	2,629,127	59,101	736,498,707	274	25
Jan., 1923	2,694,158	2,637,754	56,404	804,144,951	298	26½
Feb., 1923	2,692,283	2,651,588	40,695	768,748,235	286	23 2–3
Mch., 1923	2,692,601	2,643,678	48,923	869,681,186	323	27
Apr., 1923	2,693,145	2,641,279	51,866	800,649,936	297	24 2–3
May, 1923	2,694,444	2,639,536	54,908	858,241,998	319	26½
June, 1923	2,695,454	2,628,270	67,184	777,707,133	289	26
July, 1923	2,686,047	2,597,248	88,799	649,556,694	242	25
Aug., 1923	2,690,487	2,583,023	107,464	707,433,638	263	27
Sept., 1923	2,692,175	2,591,269	100,906	678,363,396	252	24½
Oct., 1923	2,694,523	2,609,088	85,435	772,904,083	287	26¾
Nov., 1923	2,699,387	2,606,953	92,434	734,405,921	272	25½
Dec., 1923	2,706,061	2,600,054	106,007	638,040,745	236	25
Jan., 1924	2,716,055	2,629,996	86,059	782,033,643	288	26½
Feb., 1924	2,727,430	2,620,932	106,498	707,063,967	259	24 2–3
Mch., 1924	2,730,785	2,601,470	129,315	716,646,391	262	26
Apr., 1924	2,743,476	2,590,290	153,186	697,154,823	254	25 2–3
May, 1924	2,779,750	2,520,718	259,032	615,285,416	221	26½
June, 1924	2,797,610	2,492,192	305,418	536,909,190	192	25
July, 1924	2,798,242	2,442,712	355,530	509,501,343	182	26
Aug., 1924	2,802,948	2,494,576	308,372	558,974,658	199	26
Sept., 1924	2,816,446	2,601,422	215,024	682,744,489	242	25½
Oct., 1924	2,817,396	2,687,475	129,921	790,343,921	281	26¾
Nov., 1924	2,817,784	2,710,810	106,974	740,139,714	263	24½
Dec., 1924	2,817,178	2,720,938	96,240	751,660,840	267	26
Jan., 1925	2,822,762	2,743,666	79,096	809,511,875	287	26½
Feb., 1925	2,821,095	2,755,186	65,909	760,785,438	270	23 2–3
Mch., 1925	2,818,230	2,728,030	90,200	821,165,316	291	26
Apr., 1925	2,829,566	2,730,226	99,340	796,080,978	281	25 2–3
May, 1925	2,830,040	2,721,056	108,984	744,549,757	263	25½
June, 1925	2,842,790	2,719,752	123,038	746,142,994	262	26
July, 1925	2,855,166	2,712,790	142,376	705,609,710	247	26
Aug., 1925	2,853,664	2,695,430	158,234	683,111,641	239	26
Sept., 1925	2,857,434	2,663,860	193,574	707,648,944	248	25½
Oct., 1925	2,856,134	2,680,670	175,464	800,643,893	280	26¾
Nov., 1925	2,872,946	2,785,448	87,498	811,591,287	282	24½
Dec., 1925	2,877,826	2,785,140	92,686	820,595,351	285	25
Jan., 1926	2,878,386	2,782,630	95,756	836,880,652	291	25½
Feb., 1926	2,893,174	2,786,662	106,512	784,810,077	271	23 2–3
Mch., 1926	2,917,966	2,800,622	117,344	877,510,278	301	27
Apr., 1926	2,923,004	2,799,758	123,246	820,237,109	281	25 2–3
May, 1926	2,919,558	2,745,278	174,280	731,116,970	250	25½
June, 1926	2,912,880	2,748,224	164,656	750,134,856	258	26
July, 1926	2,911,890	2,751,446	160,444	705,034,842	242	26
Aug., 1926	2,917,424	2,753,400	164,024	774,716,476	266	26
Sept., 1926	2,919,084	2,807,606	111,478	825,066,935	283	25½
Oct., 1926	2,915,790	2,828,194	87,596	820,067,064	281	25¾
Nov., 1926	2,919,870	2,838,368	81,502	857,681,984	294	25½
Dec., 1926	2,918,146	2,840,142	77,004	838,665,024	287	26
Jan., 1927	2,953,632	2,842,322	111,310	838,554,964	284	25½
Feb., 1927	2,953,916	2,864,536	89,380	812,132,264	275	23 2–3
Mch., 1927	2,974,614	2,898,212	76,402	951,975,031	320	27
Apr., 1927	2,972,154	2,914,570	57,584	892,325,565	300	25 2–3
May, 1927	2,969,814	2,902,778	67,036	906,984,240	305	25½
June, 1927	2,971,652	2,896,444	75,208	925,749,427	312	26
July, 1927	2,969,332	2,899,194	70,138	832,384,063	280	25 1–6
Aug., 1927	2,993,128	2,891,060	102,068	944,655,281	316	27
Sept., 1927	2,983,832	2,906,120	77,712	911,293,099	305	25½
Oct., 1927	3,011,054	2,924,126	86,928	886,751,411	294	25¾
Nov., 1927	3,030,538	2,954,220	76,318	916,904,999	303	25¼
Dec., 1927	3,047,000	2,975,000	72,000	847,055,000	278	25

North Carolina

	Spindles in Place	Active Spindles	Idle Spindles	Active Spindle Hrs.	Av. Hrs. Per Spindle in Place	Working Days
Aug., 1921	.....	5,228,266	.....	1,200,591,162	...	27
Sept., 1921	.....	5,058,431	.....	1,294,655,220	256	25
Oct., 1921	.....	5,086,409	.....	1,339,156,370	263	25½
Nov., 1921	5,245,651	5,138,730	106,921	1,408,013,815	268	24½
Dec., 1921	5,247,027	5,157,719	89,308	1,310,163,450	250	26
Jan., 1922	5,272,176	5,200,995	71,181	1,479,223,560	281	25½
Feb., 1922	5,304,000	5,253,199	50,801	1,369,560,481	258	23 2–3
Mch., 1922	5,284,194	5,199,315	84,879	1,443,126,278	273	27
Apr., 1922	5,286,944	5,170,575	116,369	1,265,415,775	239	24 2–3
May, 1922	5,286,004	5,178,511	107,493	1,465,173,400	277	26½
June, 1922	5,283,302	5,174,226	109,076	1,493,114,921	283	26
July, 1922	5,288,380	5,171,809	116,571	1,380,151,382	261	25
Aug., 1922	5,295,328	5,167,384	127,944	1,461,369,313	276	27
Sept., 1922	5,300,050	5,203,794	96,256	1,462,406,290	276	25½
Oct., 1922	5,300,284	5,221,725	78,559	1,580,113,699	298	25¾
Nov., 1922	5,340,033	5,261,953	78,080	1,612,450,610	302	25½
Dec., 1922	5,352,765	5,258,597	94,168	1,348,135,272	252	25
Jan., 1923	5,384,009	5,329,563	54,446	1,747,816,605	325	26½

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Study of Spindle Hours

(Continued from Page 18)

	Spindles in Place	Active Spindles	Idle Spindles	Active Spindle Hrs.	Av. Hrs. Per Spindle in Place	Working Days
Feb., 1923	5,424,153	5,338,001	86,152	1,570,372,972	290	23 2-3
Mch., 1923	5,438,458	5,378,465	59,993	1,763,627,733	324	27
Apr., 1923	5,449,661	5,383,577	66,084	1,667,405,977	306	24 2-3
May, 1923	5,470,583	5,387,865	82,718	1,782,995,558	326	26½
June, 1923	5,500,537	5,364,490	136,047	1,591,072,856	289	26
July, 1923	5,508,913	5,361,462	147,451	1,470,335,600	267	25
Aug., 1923	5,533,609	5,314,014	219,595	1,538,759,326	278	27
Sept., 1923	5,598,257	5,390,915	207,342	1,534,384,049	274	24½
Oct., 1923	5,615,271	5,451,153	164,118	1,678,271,855	299	26¾
Nov., 1923	5,646,103	5,450,411	195,692	1,589,101,442	281	25½
Dec., 1923	5,672,327	5,522,054	150,273	1,363,447,200	240	25
Jan., 1924	5,715,207	5,554,480	160,727	1,874,673,854	328	26½
Feb., 1924	5,723,041	5,541,311	181,730	1,520,824,733	266	24 2-3
Mch., 1924	5,741,906	5,458,084	283,822	1,468,769,273	256	26
Apr., 1924	5,786,732	5,424,036	362,696	1,405,328,976	243	25 2-3
May, 1924	5,817,724	5,323,775	493,949	1,224,022,466	210	26½
June, 1924	5,826,452	5,183,536	642,916	1,093,829,316	188	25
July, 1924	5,858,762	5,151,378	707,384	1,097,988,655	187	26
Aug., 1924	5,887,990	5,113,814	774,176	1,072,532,309	182	26
Sept., 1924	5,904,514	5,406,436	498,078	1,363,234,973	231	25½
Oct., 1924	5,908,580	5,594,925	313,655	1,660,334,642	281	26¾
Nov., 1924	5,908,194	5,701,732	206,462	1,598,352,777	271	24½
Dec., 1924	5,955,352	5,772,219	183,133	1,632,206,957	274	26
Jan., 1925	5,964,960	5,833,012	131,948	1,896,203,852	318	26½
Feb., 1925	5,969,500	5,833,616	135,884	1,724,480,229	289	23 2-3
Mch., 1925	5,955,210	5,805,324	149,886	1,852,870,963	311	26
Apr., 1925	5,960,170	5,773,244	186,926	1,832,993,906	308	25 2-3
May, 1925	5,971,792	5,746,198	225,594	1,728,301,341	289	25½
June, 1925	5,973,237	5,666,262	306,975	1,646,128,860	276	26
July, 1925	5,982,770	5,578,100	404,670	1,561,078,098	261	26
Aug., 1925	5,976,688	5,525,178	451,510	1,451,510,908	243	26
Sept., 1925	5,988,656	5,606,588	382,068	1,401,242,581	234	25½
Oct., 1925	6,032,724	5,729,478	303,246	1,520,389,743	252	26¾
Nov., 1925	6,037,396	5,758,862	278,534	1,624,171,089	269	24½
Dec., 1925	6,057,660	5,806,278	251,382	1,699,223,955	281	25
Jan., 1926	6,059,614	5,773,544	286,070	1,849,456,820	305	25½
Feb., 1926	6,063,200	5,816,274	246,926	1,766,643,667	291	23 2-3
Mch., 1926	6,069,858	5,815,012	254,846	1,955,539,786	322	27
Apr., 1926	6,073,432	5,794,054	279,378	1,787,033,808	294	25 2-3
May, 1926	6,069,246	5,720,468	348,778	1,669,110,921	275	25½
June, 1926	6,074,792	5,702,550	372,242	1,679,146,379	275	26
July, 1926	6,076,888	5,661,676	415,212	1,550,557,258	255	26
Aug., 1926	6,081,816	5,666,510	415,306	1,630,215,680	268	26
Sept., 1926	6,082,696	5,763,706	318,990	1,861,378,356	306	25½
Oct., 1926	6,094,088	5,849,958	244,130	1,873,250,167	307	25¾
Nov., 1926	6,106,138	5,888,796	217,342	1,950,302,026	319	25½
Dec., 1926	6,108,582	5,887,702	220,880	1,838,189,800	301	26
Jan., 1927	6,109,308	5,923,054	186,254	1,952,282,179	320	25½
Feb., 1927	6,113,125	5,947,050	166,075	1,879,106,374	307	23 2-3
Mch., 1927	6,130,722	5,955,530	175,192	2,141,112,163	349	27
Apr., 1927	6,190,329	6,016,600	173,729	1,986,971,919	321	25 2-3
May, 1927	6,208,324	6,028,526	179,798	2,055,290,462	331	25½
June, 1927	6,200,836	6,020,196	180,640	2,028,486,952	327	26
July, 1927	6,209,804	6,040,184	169,620	1,844,533,101	297	25 1-6
Aug., 1927	6,200,594	6,008,390	192,204	1,979,394,624	319	27
Sept., 1927	6,205,924	6,037,612	168,312	2,013,676,242	324	25½
Oct., 1927	6,203,098	6,052,358	150,740	1,978,700,076	319	25¾
Nov., 1927	6,201,002	6,034,862	166,140	1,993,371,350	321	25¼
Dec., 1927	6,200,000	6,017,000	173,000	1,706,313,170	275	25

South Carolina

	Spindles in Place	Active Spindles	Idle Spindles	Active Spindle Hrs.	Av. Hrs. Per Spindle in Place	Working Days
Aug., 1921	-------	5,013,538	-----	1,216,966,984	----	27
Sept., 1921	-------	4,926,505	-----	1,249,654,828	254	25
Oct., 1921	-------	4,940,833	-----	1,225,716,584	248	25½
Nov., 1921	5,078,260	5,015,692	62,568	1,292,582,137	255	24½
Dec., 1921	5,075,540	5,008,735	66,805	1,285,041,798	253	26
Jan., 1922	5,085,336	5,021,365	63,971	1,342,289,133	264	25½
Feb., 1922	5,089,262	5,022,645	66,617	1,258,448,052	247	23 2-3
Mch., 1922	5,089,818	4,989,060	100,758	1,406,903,541	276	27
Apr., 1922	5,078,048	4,980,310	97,738	1,269,135,005	250	24 2-3
May, 1922	5,076,459	4,993,616	82,843	1,387,186,087	273	26½
June, 1922	5,076,290	4,992,386	83,904	1,389,459,699	274	26
July, 1922	5,087,840	5,001,089	86,751	1,293,070,494	254	25
Aug., 1922	5,087,346	5,020,848	66,498	1,436,823,207	282	27
Sept., 1922	5,099,616	5,025,471	74,145	1,411,654,232	277	25½
Oct., 1922	5,101,100	5,061,206	39,894	1,450,226,463	284	25¾
Nov., 1922	5,102,092	5,058,351	43,471	1,485,831,038	291	25½
Dec., 1922	5,102,766	5,049,185	53,581	1,433,331,194	281	25
Jan., 1923	5,109,750	5,062,427	47,323	1,584,537,479	310	26½
Feb., 1923	5,110,596	5,072,688	37,908	1,452,794,786	284	23 2-3
Mch., 1923	5,116,599	5,078,421	38,178	1,619,432,566	317	27
Apr., 1923	5,116,242	5,070,298	45,944	1,516,433,170	296	24 2-3
May, 1923	5,115,662	5,066,701	48,961	1,618,302,888	316	26½
June, 1923	5,125,208	5,043,221	81,987	1,529,543,574	298	26
July, 1923	5,129,764	4,933,844	195,920	1,372,582,787	268	25
Aug., 1923	5,133,157	5,005,293	127,864	1,443,057,726	281	27
Sept., 1923	5,136,927	5,039,484	97,443	1,425,690,661	278	24½
Oct., 1923	5,158,154	5,017,683	140,471	1,523,469,680	295	26¾
Nov., 1923	5,166,370	5,041,542	124,828	1,483,979,044	287	25½
Dec., 1923	5,173,273	5,088,335	84,938	1,378,626,919	266	25
Jan., 1924	5,180,298	5,101,201	79,097	1,613,572,504	311	26½
Feb., 1924	5,181,266	5,098,398	82,868	1,436,663,830	277	24 2-3
Mch., 1924	5,185,292	5,076,724	108,568	1,413,060,257	273	26
Apr., 1924	5,194,248	5,097,303	96,945	1,326,220,544	255	25 2-3
May, 1924	5,195,854	4,949,014	246,840	1,237,990,450	238	26½
June, 1924	5,219,306	4,935,623	283,683	1,158,314,946	222	25
July, 1924	5,263,258	4,877,754	385,504	1,146,745,626	218	26
Aug., 1924	5,267,150	4,751,995	515,155	1,156,799,797	220	26
Sept., 1924	5,279,463	4,940,946	338,517	1,359,363,406	257	25½
Oct., 1924	5,272,731	5,096,617	176,114	1,565,933,440	297	26¾
Nov., 1924	5,281,776	5,172,872	108,904	1,487,890,358	282	24½
Dec., 1924	5,283,074	5,184,546	98,528	1,469,701,643	278	26
Jan., 1925	5,295,949	5,254,642	41,307	1,664,881,524	314	26½
Feb., 1925	5,291,338	5,255,301	36,037	1,494,979,932	283	23 2-3
Mch., 1925	5,295,508	5,234,344	61,164	1,631,216,291	308	26
Apr., 1925	5,294,094	5,256,730	37,364	1,629,385,732	308	25 2-3
May., 1925	5,300,654	5,209,078	91,576	1,545,963,117	292	25½
June, 1925	5,314,022	5,180,306	133,716	1,525,701,714	287	26
July, 1925	5,321,264	5,146,036	175,228	1,454,772,191	273	26
Aug., 1925	5,320,342	5,088,052	232,290	1,382,778,763	260	26
Sept., 1925	5,329,114	5,145,782	183,332	1,415,085,831	266	25½
Oct., 1925	5,330,934	5,213,268	117,666	1,530,728,180	287	26¾
Nov., 1925	5,328,924	5,267,498	61,426	1,567,314,136	294	24½
Dec., 1925	5,329,424	5,289,082	40,342	1,670,809,443	314	25

(Continued on Page 22)

Study of Spindle Hours

(Continued from Page 20)

	Spindles in Place	Active Spindles	Idle Spindles	Active Spindle Hrs.	Av. Hrs. Per Spindle in Place	Working Days
Jan., 1926	5,329,376	5,299,692	29,684	1,689,782,656	317	25½
Feb., 1926	5,333,620	5,291,248	42,372	1,628,386,767	305	23 2–3
Mch., 1926	5,351,898	5,317,088	34,810	1,825,886,095	341	27
Apr., 1926	5,348,512	5,317,544	30,968	1,716,521,549	321	25 2–3
May, 1926	5,348,512	5,254,126	94,386	1,432,610,841	268	25½
June, 1926	5,353,976	5,239,378	114,598	1,515,037,903	283	26
July, 1926	5,355,360	5,206,588	148,772	1,446,620,732	270	26
Aug., 1926	5,355,432	5,267,378	88,054	1,639,539,883	306	26
Sept., 1926	5,359,464	5,288,076	71,388	1,753,827,566	327	25½
Oct., 1926	5,361,350	5,311,156	50,194	1,701,115,219	317	25¾
Nov., 1926	5,361,386	5,327,986	33,400	1,773,937,459	331	25½
Dec., 1926	5,361,292	5,316,724	44,568	1,799,230,344	336	26
Jan., 1927	5,366,674	5,329,940	36,734	1,783,841,854	332	25½
Feb., 1927	5,370,921	5,344,750	26,171	1,709,713,933	318	23 2–3
Mch., 1927	5,373,666	5,338,118	35,548	1,961,320,196	365	27
Apr., 1927	5,375,672	5,331,214	44,458	1,824,707,206	339	25 2–3
May, 1927	5,381,754	5,330,978	50,776	1,848,703,845	344	25½
June, 1927	5,392,536	5,355,626	56,910	1,896,891,826	352	26
July, 1927	5,402,540	5,295,828	106,712	1,732,876,132	381	25 1–6
Aug., 1927	5,401,698	5,329,502	72,196	1,964,207,643	364	27
Sept., 1927	5,408,722	5,327,066	81,656	1,883,933,513	348	25½
Oct., 1927	5,409,676	5,331,588	78,088	1,837,327,683	340	25¾
Nov., 1927	5,451,378	5,384,694	66,684	1,902,860,718	349	25¼
Dec., 1927	5,453,000	5,396,000	67,000	1,756,372,000	322	25

Massachusetts

	Spindles in Place	Active Spindles	Idle Spindles	Active Spindle Hrs.	Av. Hrs. Per Spindle in Place	Working Days
Aug., 1921	-------	11,810,563	-------	1,998,565,497	---	27
Sept., 1921	-------	10,464,305	-------	1,949,746,264	186	25
Oct., 1921	-------	10,667,995	-------	2,004,460,845	188	25½
Nov., 1921	11,846,675	10,731,729	1,114,946	1,959,350,899	165	24½
Dec., 1921	11,841,137	10,705,688	1,135,449	2,073,484,580	175	26
Jan., 1922	11,849,394	10,517,793	1,331,601	2,025,574,108	171	25½
Feb., 1922	11,874,083	10,479,198	1,394,885	1,834,490,374	154	23 2–3
Mch., 1922	11,873,460	10,188,243	1,685,217	2,047,985,627	172	27
Apr., 1922	11,885,446	9,706,012	2,179,434	1,610,053,438	135	24 2–3
May, 1922	11,885,360	9,984,043	1,901,317	1,887,669,536	159	26½
June, 1922	11,883,104	10,105,422	1,777,682	1,975,352,750	166	26
July, 1922	11,924,629	10,048,400	1,876,229	1,778,968,556	149	25
Aug., 1922	11,922,236	10,095,368	1,826,868	2,097,152,621	176	27
Sept., 1922	12,003,824	10,534,662	1,469,162	1,952,731,052	163	25½
Oct., 1922	12,008,098	10,654,427	1,353,671	2,077,054,857	173	25¾
Nov., 1922	12,008,258	10,830,978	1,177,280	2,205,695,534	184	25½
Dec., 1922	12,004,042	10,819,219	1,184,823	2,152,014,985	179	25
Jan., 1923	11,987,402	10,853,794	1,133,608	2,305,830,742	192	26½
Feb., 1923	11,985,638	10,812,132	1,173,506	2,063,213,818	172	23 2–3
Mch., 1923	11,993,961	10,925,388	1,068,573	2,361,382,758	197	27
Apr., 1923	11,974,834	10,937,191	1,037,643	2,128,143,852	178	24 2–3
May, 1923	11,971,982	10,847,447	1,124,535	2,253,776,366	188	26½
June, 1923	11,970,824	10,469,258	1,501,566	1,974,649,111	165	26
July, 1923	11,951,334	10,235,795	1,715,539	1,646,585,873	138	25
Aug., 1923	11,957,719	9,781,200	2,176,519	1,633,873,533	137	27
Sept., 1923	11,956,406	9,960,252	1,996,154	1,616,973,454	135	24½
Oct., 1923	11,973,717	10,201,348	1,772,369	1,932,155,873	161	26¾
Nov., 1923	11,946,092	10,104,828	1,841,264	1,795,467,550	150	25½
Dec., 1923	11,952,272	9,945,643	2,006,629	1,642,010,547	137	25
Jan., 1924	11,985,346	9,140,291	2,845,055	1,721,554,846	144	26½
Feb., 1924	11,980,580	8,708,160	3,272,420	1,459,283,256	122	23 2–3
Mch., 1924	11,954,340	8,693,497	3,260,843	1,435,133,460	120	26
Apr., 1924	11,886,172	8,747,067	3,139,105	1,363,686,411	115	25 2–3
May, 1924	11,879,816	7,835,594	4,044,222	1,122,917,398	95	26½
June, 1924	11,876,028	7,249,260	4,626,768	1,009,729,308	85	25
July, 1924	11,792,160	7,382,913	4,409,247	1,020,206,601	87	26
Aug., 1924	11,778,364	7,732,476	4,045,888	1,183,300,363	100	26
Sept., 1924	11,787,016	8,078,484	3,708,532	1,306,526,777	111	25½
Oct., 1924	11,781,260	8,192,020	3,589,240	1,504,074,019	128	26¾
Nov., 1924	11,777,860	8,340,152	3,437,708	1,418,302,671	120	24½
Dec., 1924	11,766,132	8,682,514	3,083,618	1,703,255,750	145	26
Jan., 1925	11,740,238	8,825,996	2,914,242	1,707,627,590	145	26½
Feb., 1925	11,697,188	8,840,324	2,856,864	1,609,241,856	138	23 2–3
Mch., 1925	11,629,728	8,873,222	2,756,506	1,816,876,105	156	26
Apr., 1925	11,615,592	8,901,044	2,714,548	1,730,918,025	149	25 2–3
May, 1925	11,618,004	8,671,930	2,946,074	1,598,096,952	138	25½
June, 1925	11,615,372	8,257,980	3,357,392	1,549,390,356	133	26
July, 1925	11,605,232	8,143,986	3,461,246	1,494,222,582	129	26
Aug., 1925	11,520,194	7,935,790	3,584,404	1,427,182,749	124	26
Sept., 1925	11,600,348	8,042,118	3,558,230	1,431,959,072	123	25½
Oct., 1925	11,615,478	8,363,090	3,252,388	1,657,756,926	143	26¾
Nov., 1925	11,614,824	8,602,510	3,012,314	1,566,991,884	135	24½
Dec., 1925	11,585,854	8,635,228	2,950,626	1,698,639,281	147	25
Jan., 1926	11,598,430	8,619,142	2,979,288	1,636,230,457	141	25½
Feb., 1926	11,597,228	8,661,080	2,936,148	1,618,929,421	140	23 2–3
Mch., 1926	11,593,262	8,710,932	2,882,330	1,882,359,123	162	27
Apr., 1926	11,524,876	8,564,036	2,960,840	1,653,188,393	143	25 2–3
May, 1926	11,491,548	8,327,402	3,164,146	1,555,505,846	135	25½
June, 1926	11,482,618	8,075,296	3,407,322	1,526,326,560	133	26
July, 1926	11,417,406	7,764,176	3,653,230	1,292,294,982	113	26
Aug., 1926	11,414,250	8,098,086	3,316,164	1,517,785,663	133	26
Sept., 1926	11,357,826	8,319,152	3,038,674	1,601,862,700	141	25½
Oct., 1926	11,368,594	8,439,394	2,929,200	1,647,737,464	145	25¾
Nov., 1926	11,352,848	8,418,346	2,934,502	1,638,081,575	144	25½
Dec., 1926	11,344,526	8,423,320	2,921,206	1,735,580,125	153	26
Jan., 1927	11,259,906	8,429,532	2,830,374	1,672,480,921	149	25½
Feb., 1927	11,105,504	8,512,188	2,593,316	1,587,718,835	143	23 2–3
Mch., 1927	10,899,520	8,526,638	2,372,882	1,908,649,637	175	27
Apr., 1927	10,782,092	8,418,568	2,363,524	1,703,737,477	158	25 2–3
May, 1927	10,703,650	8,441,818	2,261,832	1,764,280,504	165	25½
June, 1927	10,712,172	8,335,648	2,376,524	1,809,045,653	169	26
July, 1927	10,541,966	8,104,494	2,437,472	1,524,244,618	145	25 1–6
Aug., 1927	10,394,504	7,922,082	2,472,422	1,695,998,977	163	27
Sept., 1927	10,363,298	7,933,634	2,429,664	1,574,983,571	152	25½
Oct., 1927	10,347,682	8,024,018	2,323,664	1,583,472,858	153	25¾
Nov., 1927	10,283,522	7,771,714	2,511,808	1,499,065,267	146	25¼
Dec., 1927	10,229,000	7,311,000	2,918,000	1,337,904,000	131	25

New Hampshire

	Spindles in Place	Active Spindles	Idle Spindles	Active Spindle Hrs.	Av. Hrs. Per Spindle in Place	Working Days
Aug., 1921	-------	1,457,428	-------	272,044,869	---	27
Sept., 1921	-------	1,379,926	-------	260,126,345	189	25
Oct., 1921	-------	1,347,153	-------	274,004,377	203	25½
Nov., 1921	1,449,236	1,348,828	100,408	246,020,339	170	25½
Dec., 1921	1,448,933	1,365,129	83,804	269,615,765	186	26
Jan., 1922	1,447,185	1,340,154	107,031	245,842,483	170	25½
Feb., 1922	1,447,259	1,327,166	120,093	119,024,434	82	23 2–3
Mch., 1922	1,447,359	136,416	1,310,943	32,085,791	22	27
Apr., 1922	1,447,087	137,832	1,309,255	30,959,679	21	24 2–3
May, 1922	1,447,087	140,298	1,306,789	37,120,042	26	26½
June, 1922	1,457,044	154,746	1,302,298	41,650,421	29	26
July, 1922	1,448,660	176,633	1,272,027	36,603,118	25	25
Aug., 1922	1,448,660	328,082	1,120,578	72,177,194	50	27
Sept., 1922	1,448,660	417,656	1,031,004	87,401,552	60	25½
Oct., 1922	1,448,660	534,540	914,120	102,064,511	70	25¾
Nov., 1922	1,448,660	987,549	461,111	188,357,480	130	25½
Dec., 1922	1,448,660	1,228,199	220,461	268,299,232	185	25
Jan., 1923	1,448,660	1,315,161	133,499	294,221,541	203	26½
Feb., 1923	1,448,660	1,319,470	129,190	247,655,832	171	23 2–3
Mch., 1923	1,449,319	1,349,231	100,088	278,206,681	192	27
Apr., 1923	1,449,700	1,358,626	91,074	255,903,022	177	24 2–3
May, 1923	1,449,636	1,363,750	85,886	275,139,263	190	26½
June, 1923	1,449,700	1,314,718	134,982	251,296,749	173	26
July, 1923	1,449,700	1,186,336	263,364	145,749,282	101	25
Aug., 1923	1,449,700	1,192,995	256,705	173,938,940	120	27
Sept., 1923	1,449,700	1,147,910	301,790	186,858,809	129	24½
Oct., 1923	1,449,260	1,218,838	230,422	153,464,284	106	26¾
Nov., 1923	1,448,944	997,278	451,666	147,136,482	102	25½
Dec., 1923	1,448,946	1,023,576	425,370	158,091,125	109	25
Jan., 1924	1,448,946	1,072,159	376,787	199,788,146	138	26½
Feb., 1924	1,448,986	1,040,105	408,881	176,292,588	122	24 2–3
Mch., 1924	1,448,946	981,116	467,830	163,473,450	113	26
Apr., 1924	1,448,446	915,811	532,635	166,926,531	115	25 2–3
May, 1924	1,448,406	922,741	525,665	136,306,512	94	26½
June, 1924	1,448,406	700,997	747,409	117,405,191	81	25
July, 1924	1,448,406	606,308	842,098	110,494,146	76	26
Aug., 1924	1,448,406	609,808	838,598	96,705,800	67	26
Sept., 1924	1,448,406	602,998	845,408	124,813,071	86	25½
Oct., 1924	1,448,406	571,290	877,116	115,466,063	80	26¾
Nov., 1924	1,448,406	759,388	689,018	140,914,882	97	24½
Dec., 1924	1,448,406	994,402	454,004	207,717,367	143	26
Jan., 1925	1,448,406	1,061,872	386,534	237,927,730	164	26½
Feb., 1925	1,448,406	1,103,536	344,870	222,334,820	154	23 2–3
Mch., 1925	1,445,734	1,130,264	315,470	250,532,843	173	26
Apr., 1925	1,445,734	1,200,250	245,484	241,233,667	167	25 2–3
May, 1925	1,445,734	1,245,760	199,974	260,890,838	180	25½
June, 1925	1,445,734	1,123,718	322,016	243,123,329	168	26
July, 1925	1,445,734	921,092	524,642	166,789,752	115	26
Aug., 1925	1,445,734	939,524	506,210	189,988,745	131	26
Sept., 1925	1,445,734	969,052	476,682	168,507,225	117	25½
Oct., 1925	1,445,734	1,062,044	383,690	223,533,593	155	26¾
Nov., 1925	1,445,734	1,086,418	359,316	214,292,823	148	24½
Dec., 1925	1,445,734	1,074,292	371,442	231,143,415	160	25
Jan., 1926	1,445,734	1,026,998	418,736	209,143,148	145	25½
Feb., 1926	1,445,734	1,117,650	328,084	218,841,311	151	23 2–3
Mch., 1926	1,445,734	1,124,866	320,868	258,477,427	179	27
Apr., 1926	1,445,734	1,137,904	307,830	236,938,534	164	25 2–3
May, 1926	1,445,558	1,103,968	341,590	231,938,484	160	25½
June, 1926	1,445,558	1,058,420	387,138	231,548,617	160	26
July, 1926	1,438,662	886,708	551,954	158,141,919	110	26
Aug., 1926	1,422,206	916,286	505,920	160,750,946	113	26
Sept., 1926	1,427,862	1,042,702	385,160	205,198,192	144	25½
Oct., 1926	1,428,402	1,109,652	318,750	232,299,318	163	25¾
Nov., 1926	1,427,862	1,056,384	371,478	228,200,641	160	25½
Dec., 1926	1,427,094	981,402	445,692	221,859,313	155	26
Jan., 1927	1,421,060	1,024,456	396,604	227,279,774	160	25½
Feb., 1927	1,427,862	1,085,628	342,234	230,959,370	162	23 2–3
Mch., 1927	1,427,862	1,111,850	316,012	269,755,781	189	27
Apr., 1927	1,427,862	1,112,084	315,778	253,412,175	177	25 2–3
May, 1927	1,427,646	1,091,096	336,550	249,411,425	175	25½
June, 1927	1,427,862	1,077,244	350,618	258,921,932	181	26
July, 1927	1,430,238	1,031,076	399,162	208,790,599	146	25 1–6
Aug., 1927	1,430,238	1,035,526	394,712	176,381,804	123	27
Sept., 1927	1,419,866	1,096,788	323,078	232,324,759	164	25½
Oct., 1927	1,418,362	1,106,398	311,964	247,621,318	175	25¾
Nov., 1927	1,422,724	1,075,522	347,202	234,285,377	165	25¼
Dec., 1927	1,421,382	1,019,116	402,166	229,677,589	162	25

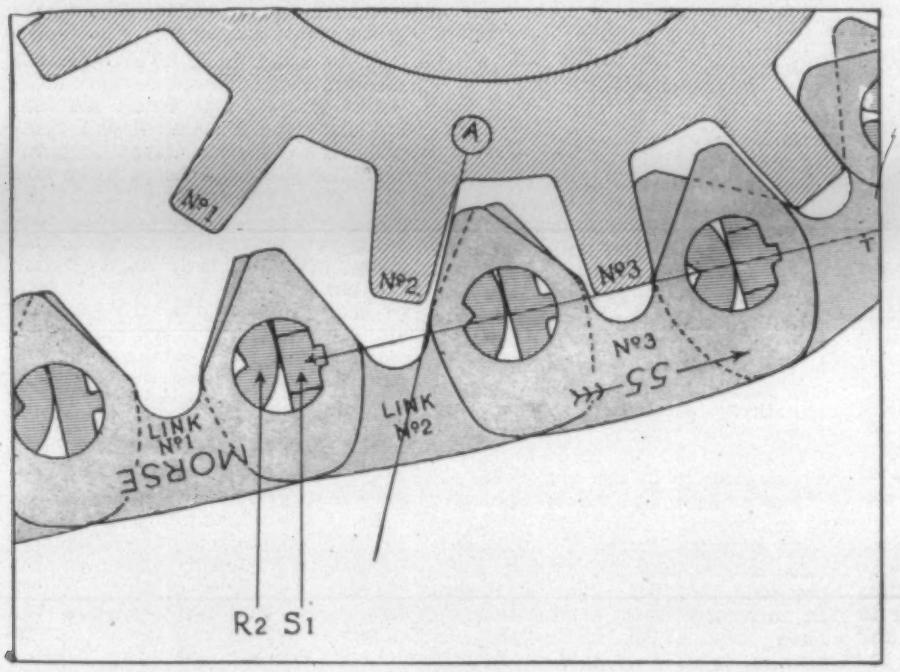
Rhode Island

	Spindles in Place	Active Spindles	Idle Spindles	Active Spindle Hrs.	Av. Hrs. Per Spindle in Place	Working Days
Aug., 1921	-------	2,805,538	------	499,229,459	---	27
Sept., 1921	-------	2,440,708	------	527,852,059	216	25
Oct., 1921	-------	2,455,761	------	526,754,734	214	25½
Nov., 1921	2,791,984	2,539,112	252,872	552,470,447	198	24½
Dec., 1921	2,791,284	2,540,454	250,830	606,863,859	217	26
Jan., 1922	2,798,129	2,582,908	215,221	541,545,887	194	25½
Feb., 1922	2,804,472	2,036,439	768,033	416,374,797	148	23 2–3
Mch., 1922	2,812,044	1,756,578	1,155,466	449,177,642	160	27
Apr., 1922	2,817,984	1,783,575	1,034,409	363,860,596	129	24 2–3
May, 1922	2,818,744	1,756,791	1,061,953	403,812,071	143	26½
June, 1922	2,820,776	1,852,192	968,584	417,959,555	148	26
July, 1922	2,829,202	1,955,144	874,058	390,635,460	138	25
Aug., 1922	2,829,354	2,149,598	679,756	493,518,666	174	27
Sept., 1922	2,837,066	2,333,058	504,008	482,524,928	170	25½
Oct., 1922	2,854,730	2,546,304	308,426	565,446,198	198	25¾
Nov., 1922	2,868,410	2,628,882	239,528	619,994,306	216	25½
Dec., 1922	2,884,042	2,667,029	217,013	603,822,808	209	25
Jan., 1923	2,890,198	2,689,661	200,537	655,373,260	227	26½
Feb., 1923	2,905,874	2,728,793	177,081	592,178,424	204	23 2–3
Mch., 1923	2,886,518	2,729,717	156,801	579,827,790	325	27
Apr., 1923	2,875,726	2,740,939	134,787	627,305,003	218	24 2–3
May, 1923	2,882,613	2,739,125	143,488	657,928,876	228	26½
June, 1923	2,882,036	2,729,848	152,188	651,378,011	191	26
July, 1923	2,876,708	2,726,512	150,196	457,740,704	159	25
Aug., 1923	2,868,612	2,669,961	198,651	603,708,893	176	27
Sept., 1923	2,871,702	2,633,558	238,144	514,870,358	179	24½
Oct., 1923	2,871,712	2,682,262	189,450	583,959,833	203	26¾
Nov., 1923	2,872,040	2,673,569	198,471	554,261,254	193	25½
Dec., 1923	2,862,849	2,661,586	201,261	519,720,057	182	25
Jan., 1924	2,864,466	2,650,330	214,136	554,818,899	194	26½
Feb., 1924	2,844,116	2,561,195	282,921	463,294,567	163	24 2–3
Mch., 1924	2,832,946	2,447,398	385,548	385,267,307	136	26
Apr., 1924	2,828,122	2,085,508	742,614	396,963,360	140	25 2–3
May, 1924	2,798,398	1,999,332	799,066	320,075,695	114	26½
June, 1924	2,798,030	1,889,235	908,795	297,908,005	106	25
July, 1924	2,797,766	1,625,402	1,172,364	271,500,068	97	26
Aug., 1924	2,795,146	1,648,338	1,146,808	273,963,611	98	26
Sept., 1924	2,794,834	1,743,438	1,051,396	322,053,153	115	25½
Oct., 1924	2,795,946	2,000,300	795,646	403,869,424	144	26¾
Nov., 1924	2,796,310	2,133,722	662,588	360,247,133	129	24½
Dec., 1924	2,796,310	2,272,684	523,626	493,837,601	177	26

(Continued on Page 60)

The MORSE Rocker Joint---

less wear—longer life—higher efficiency



The joint is the vital part of any silent chain and on its operation depend the efficiency and durability of the chain. Minimum joint wear, therefore, means long chain life.

The efficient rocker or rolling action of the Morse Rocker Joint eliminates the rubbing or sliding friction commonly found in all round pin chains. Referring to the illustration above, link No. 1 is pulling on its flat faced seat pin, S_1, against rocker pin R_2 in link No. 2.

Note how the original Morse Rocker Joint Chain carries the load between sprockets on a broad, flat bearing surface between pins, thereby reducing wear and preventing slip-page. It rocks on a line contact only when the chain is entering and leaving the sprocket.

As the sprocket rotates, link No. 2 rolls around and reaches position of link No. 3. Note that the rocker pin has now rolled on the flat seat pin.

This Rocker Joint action combines with good material and expert workmanship to make the Morse Silent Chain, noted for its 98.6% sustained efficiency and long life.

Let a Morse Transmission Engineer show you how Morse Drives are serving practically every power transmission need.

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2161R

MORSE SILENT CHAIN DRIVES

Rayon Made Marked Progress in 1927

An article by The Rayon Institute

STEADILY increasing beauty and utility in the quality of American-made rayon is thought by technical critics of the industry to be the outstanding reasons for the stupendous consumption of 100,000,000 pounds of this textile in the United States during the year just passed.

A recent study made by one of the trade associations indicates that while only 2 per cent of the high-grade dress manufacturers were using rayon in 1926, more than 34 per cent were using it in 1927.

None of the others of the Big Five textiles (cotton, wool, linen, silk and rayon) has achieved during the past year so decided an impetus, nor so outstandingly great a degree of improvement both in artistry and serviceability.

If there has been any one trend more definite than increased consumption, it may be said to be that toward multifilament yarns and yarns of varying degrees of luster—dependent upon the use for which they are designed. Two years ago 150 denier with 18 and 21 filament was most common. Today the greatest demand is felt for 24, 36 and 60 filament with an ever mounting demand for multifilament.

Rayon yarn is today available to the manufacturer at a comparatively reasonable cost which in turn makes it possible for the manufacturer to design and weave serviceable and beautiful fabrics at prices within the purchasing power of the vast majority of people. As in fabrics made of other yarns, the prices of rayon merchandise vary according to the quality of the textile employed. Construction of the cloth, efficiency in manufacture, styling, methods of marketing and other contingent problems, of course play their parts, but the intrinsic value of rayon is high in proportion to the price paid.

Improvement in Fibre.

Particularly high praise has been given by reviewers of rayon in 1927 to the chemists and engineers of rayon companies whose indefatigable zeal and skill have done so much to increase quality; to provide new possibilities in usefulness, and to bring about consistent general improvement in the fibre.

Linked with the textile experts and deserving equal praise are the fabric manufacturers, the dyers, and finishers who have become increasingly proficient in handling rayon and rayon merchandise throughout the processes necessary on its journey to the consumer.

The present high standards have, it is generally admitted, resulted from hard and ceaseless work, forward-looking thought, courage in experimentation, and fine ingenuity. In no branch of American industry have these standards of progress been so clearly carried aloft; nor with more satisfying results to those individuals and companies whose interest has impelled the movement.

Ryon Institute.

It is believed that the recently created Rayon Institute has been another outstanding and contributive step, the potential results of which stand out on 1928 skyline of progress in the rayon industry.

Rayon Institute is the organization through which a nation-wide educational campaign is being set into motion. The DuPont Rayon Company, the Industrial Rayon Corporation, the Belamose Corporation and the Viscose Company form the group which is sponsoring this educational program, but no particular brand of rayon is to be exploited, nor any company identities brought to bear in its efforts. To the contrary every effort is being put forward to make the campaign one of general rayon industrial good will designed to increase widespread, intelligent, profitable and volume merchandising of rayon fabrics, and greater consumer appreciation and satisfaction.

Need is felt for more general public understanding of increasing rayon value both from the standpoints of style and serviceability. There has been a tendency to allow the achievements of the industry to go unheralded and unknown outside the trade. Both Parisian and American dressmakers have been utilizing rayon in fashionable creations and women have been wearing beautiful rayon fabrics for a long time without understanding fully the part it is playing in their sense of satisfaction. There has not been so much of intentional misunderstanding as of lack of information. Many women learned in the early days of rayon to know it in its infantile efforts. They have not, generally speaking, been kept informed of its progress, although they have unknowingly benefited by its ever increasing value and uses. The work of Rayon Institute, it is believed, will valuably aid the commendable work begun by those alert distributors who have already foreseen this need of educational effort.

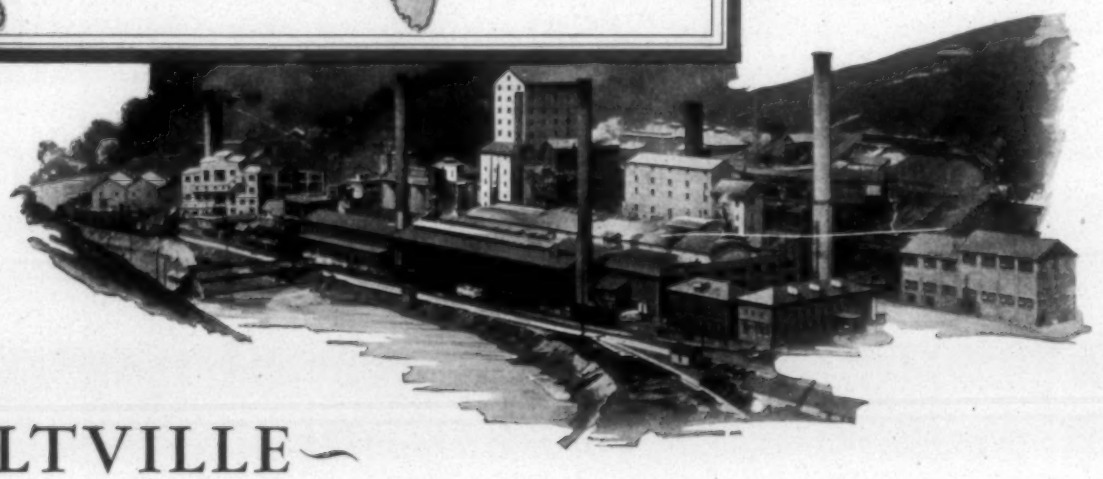
Rayon Institute is succeeding in reaching the trade and public through public print, through very helpful and reciprocal promotion work and through means of a distinctive and intimate Fashion Show which it will shortly sponsor in a national tour of many of the principal cities of the country.

Rayon Institute is located at 250 Fifth avenue, New York. E. L. Starr is its general director, while E. L. Fetta is public relations counsel and Miss Jane Ellis, fashion counsel.

The costumes gathered for the Fashion Show have been designed and made by distinguished dressmakers on both sides of the Atlantic.

(Continued on Page 50)

Saltville, Virginia, plant of The Mathieson Alkali Works {Inc.}—located at one of the most extensive deposits of salt in the South. Saltville is served by the Norfolk and Western Railway, southward to Bristol, {Va.—Tenn.}, Winston-Salem and Durham, eastward to Norfolk, northward to Hagerstown, and westward to Cincinnati and Columbus, with through connections to all points via the Southern Railway, Atlantic Coast Line, Baltimore & Ohio, Pennsylvania, Chesapeake & Ohio, Louisville & Nashville, Seaboard Air Line and their connections.



SALTVILLE

a Keystone in the South's Rapidly Growing Industrial Structure

MATHIESON Industrial Chemicals

CAUSTIC SODA
LIQUID CHLORINE
BICARBONATE OF SODA
MODIFIED VIRGINIA SODA
SODA ASH
BLEACHING POWDER
ANHYDROUS AMMONIA
AQUA AMMONIA

LOCATED in the heart of one of the most extensive deposits of salt in the South, the Saltville, Virginia, plant of The Mathieson Alkali Works, has become a valuable asset to the chemical consuming industries of the South and Southwest as well as of many sections of the North and Middle West.

Southern industry, favored with an ample and readily accessible source of heavy chemicals, has been able to trim manufacturing costs in every department that requires the use of alkali. By reducing costs, while at the same time maintaining high quality, Southern alkali users have laid the cornerstone of industrial achievement and made their names and trade marks synonymous with high quality, uniformity and outstanding value.

To grow industrially, a community must have basically sound resources of such important raw materials as alkali and acid; in fact, industrial growth can be measured by alkali production. Saltville, then, may well be termed a keystone in the growing structure of Southern industry.

The MATHIESON ALKALI WORKS (Inc.)
250 PARK AVENUE NEW YORK CITY

PHILADELPHIA . CHICAGO . PROVIDENCE . CHARLOTTE . CINCINNATI DEAL DIRECT WITH THE MANUFACTURER Works: NIAGARA FALLS, N.Y. SALTVILLE, VA. NEWARK, N.Y.

South's Industrial Expansion Linked With Power Development

By John Paul Lucas, Vice-President, Southern Public Utilities Company, Manager Industrial Department, Duke Power Company.

THE shift of industry from highly industrial New England and the East became decidedly more perceptible during 1927 than during any previous year. This shift of industry is taking two forms. First, the bodily moving of existing plants from the older industrial sections to the South; and, the continued and increasing development of entirely new industrial establishments in this section by home and outside capital in the face of the abandonment of plants in the older and higher-production-cost sections.

The past 12-months period has been a notable one both because of the large number of removals of plants to this section and because of the large number of new industrial plants that have been built outright in this section. In both of these classes in the textile industry the totals have surpassed the totals during any previous like period.

In spite of the slight curtailment, necessary for the stabilization of the market for textile products, that was effective in the textile industry during the last few weeks of 1927, the industry as a whole in the South operated more spindle hours, consumed more cotton, and produced more goods during 1927 than during any previous year if the consumption of power may be considered as an accurate index to the activity and expansion in an industry. The production of electric power in the Southern States during the past year, according to a statement in the current issue of Manufacturers' Record, was 15,899,000,000 k.w. hours as compared to 13,679,650,000 k.w. hours in 1926.

It is interesting to note that the increase in the consumption of power was considerably greater in North Carolina than in any other Southern State, the figures for this State being 1,785,000,000 k.w. hours in 1927 against 1,117,378,000 k.w. hours in 1926, the increase being almost 670,000,000 k.w. hours. The next largest increase was shown by the State of Texas, with an output of 345,000,000 k.w. hours more than during 1926, and the next Alabama with an increase of 325,000,000 k.w. hours over the previous year.

There have been many evidences during the past years; and more than ever during 1927 that the South is entering a new phase in its industrial developments. This is particularly true of Piedmont Carolinas where already there has been a larger degree of diversity in industry than there has been in any other section of the Southern States.

The industrial development which has taken place in the South during the past two decades has been literally phenomenal—so much so that it has attracted the attention of industrial leaders and economists throughout this country and in Europe. The real beginning of the industrial development of the South was coincident with, or rather immediately followed, the completion of the first hydro-electric plants in this section. The availability of cheap electric power, convenient to use, flexible, efficient, and eliminating many of the problems that are ever present with the individual power plants, has served as a mighty stimulus to industrial development. There was a sufficient nucleus of industry already to serve as a foundation for the new and larger development and this growth and expansion of industry has been steady and constant during the epoch which started with the beginning of the hydro-electric developments and which is now closing.

In this connection it may be remarked that, in addition to the advantages of electric power already mentioned ,there is another advantage which has constituted a considerable factor in industrial development, particularly in the textile field—the fact that an industrialist or group planning to establish a manufacturing plant have been enabled to invest practically all of their money in productive equipment instead of having 30 to 40 per cent tied up in an individual power plant. This advantage and the fact that plants have been able to expand at will without the handicap of expanding an individual power plant have been two of the outstanding factors in the expansion of industry in the South during these past two decades.

It is not amiss to remark here upon some of the other factors that are contributing to bring about the notable shift of industry from the older industrial sections in the North to this section. None of these have been more potent than the adequacy of the supply, the character and the efficiency of the native labor in this section. This labor, ambitious, industrious, too intelligent to be influenced by self-seeking and professional agitators, and maintaining a standard of living higher and more wholesome than that maintained by workers in the same indstries in the more intensively developed industrial sections, has not only manned the textile industry and others but is providing many of the executives who are directing operation of the industries in which it is now employed.

The sympathetic, conservative and

(Continued on Page 44)

A Backward Glance Through 1927

By D. H. Hill, Jr., Associate Editor

ALL things considered, 1927 was the most satisfactory year that Southern mills have experienced for some time past. Conditions generally were more stable, operations were steadier and earnings larger than during the several preceding years. Production and sales were more nearly equal, showing an approximately even balance for the year.

While the textile industry really showed progress during 1927, the year was not without its difficulties. Chief among them was the old question of how the industry might shake off the effects of its time-hallowed practice of producing goods with entire disregard of the ability of the market to absorb them. This long-standing habit of individual mill operators created a market problem easy to see but difficult to deal with. For many years past, the advantage gained in those infrequent periods when the markets favored the producer was quickly nullified through increased output. The opportunity for sustained demand and larger profits was wiped out by increasing production, mainly through night work, so that supply overtook demand and prices went downward under the weight of increasing stocks.

Last year the textile industry, for the first time, began to work itself into a position where it could intelligently meet its greatest problem. This was made possible by the new spirit of cooperation that became apparent among mill owners, a spirit that crystalized in the formation of the Cotton-Textile Institute in 1926. After the formal organization of the Institute came the clearer realization that the common problem created by the haphazard production of widely separated units could be solved only by making it possible for these units to operate with an intelligent understanding of their individual relaship to the whole productive scheme.

The translation of this idea into definite accomplishment was without doubt the most important develoment in the textile situation in the past year. It holds every promise of marking the coming of a new era in production and distribution. With the constructive character of the leadership of the Cotton-Textile Institute firmly established in the minds of its members, as reflected in the cooperation and support that the latter are now according it, it is apparent that the textile industry is destined to rest upon an immeasurably firmer foundation.

Physical Growth.

The Southern mills showed a very substantial physical growth during the past year. This was brought about by the enlargememnt of existing plants, the building of new mills by Southern owners and the continued movement of mills from the North and East. This increase in mill equipment is set forth in detail elsewhere in this issue.

Knitting Mills.

An interesting feature of the equipment added in 1927 stresses the marked growth of the knitting industry in the South. A large number of knitting mills were enlarged last year and many other new mills established. The products of these plants shows the Southern hosiery mills are now making practically all the popular types and styles and that the production of cheap cotton hosiery formerly made by almost all Southern knitters has given away to a highly diversified line. A number of full-fashioned hosiery mills are now successfully operating in the South and the production of fancy hose in silk, rayon, wool and mixtures of these fibres is very general.

Dyeing, Bleaching and Finishing Plants.

It is also worthy of note that the South is making steady progress in building up a dyeing, bleaching and finishing industry more in keeping with its production of unfinished goods. Several new dyeing and bleaching plants, and a new print works were established last year and the trend in this direction is definite enough to indicate that the South is steadily developing a better balanced and more self-contained textiie industry.

Mills Move South.

The Southward movement of mills from Northern States continued apace during 1927. An increasing number of these plants have come into the Southern field. One very interesting feature of this movement, which has been under way for several years, is that it is adding much to the diversity of textile production in the South. Silk mills. dyeing plants, and a great variety of mills generally designated as specialty manufacturers were among the newcomers last year. Several years ago, most of the mills coming South were from the New England States, but since the migration has gained greater headway a number of plants from New York, New Jersey and Pennsylvania are noted among the latest arrivals.

Machinery Developments.

Machinery purchased by South-mills last year, both for expansion and replacement purposes shows that the mills generally are being kept on a very modern basis. There were few outstanding developments in the equipment field last year. The tendency to place more emphasis upon the preparatory machinery, which has been noted for the past several years, continued very noticeable . Equipment for cleaning cotton and utilizing lower grades for the same quality of product received special attention. It is safe to say that in this respect, Southern mills are far more efficiently equipped than was formerly the case.

Changes noted in mill machinery during 1927 leaned largely toward improvement and refinement to give higher production at lower cost, rather than toward radical departures in design. Some of the newer machines are capable of a 20 per cent increase in production over previous types. They have in many cases, made the older types of machinery practically obsolete and have stressed the necessity of keeping plant equipment on a modern basis in order to meet present day competition.

Wider Looms.

The tendency in all cotton goods weaving now seems definitely toward wider fabrics. For this reason it is noted that the demand for machinery for new mills and for replacement purposes is distinctly toward the wider looms, especially those made for finer goods. The machinery builders report that there is now very little demand for looms

(Continued on Page 52)

Mills Show Good Earnings in 1927

For cotton mills of the South the year 1927 has been the most profitable since 1923, according to a report of A. M. Law & Co., stocks and bonds brokers, of Spartanburg, in connection with a compilation of semi-annual dividends for many of the principal textile manufacturing plants of the Southern States.

The Report

This report says:

"We give compilation of semi-annual dividends of representative cotton mills of the South on or about January 1, 1928. This list is by no means comprehensive as it does not include dividends paid by many of the smaller mills nor of some of the largest companies whose stocks is so closely held that the rate would not be of general interest. Also there are many companies whose dividend periods of one or more issues are at other dates than January 1.

"The past six months has not been entirely as favorable on as the high price of cotton made it quite difficult for the mills to realize a margin of profit after the first of September. General curtailment and careful merchandising, however, have led to satisafctory earnings in most instances. The year 1927 has been the most profitable since 1923.

"It is reasonable to anticipate that earnings for the next six months period will be satisfactory. Most of the Southern mills maintain conservative dividends which are paid year in and year out."

MILL	Dividend.	Stock.	Total Dividend 1927.
Abbeville Cotton Mills	3 %	$ 635,400‡	$ 38,124.00
American Spinning Co.	5 %	525,000‡	52,500.00
American Yarn & Processing Co.	2 %*	1,539,100‡	123,138.00
Alta Vista Cotton Mills	3½%	250,000§	17,500.00
Aragon-Baldwin Mills	3 %	1,300,000‡	78,000.00
Aragon-Baldwin Mills	3½%	2,300,000§	161,000.00
Arcadia Mills	5 %	200,000‡	20,000.00
Arcadia Mills	3½%	800,000§	56,000.00
Arcade Mills	2 %*	619,300‡	49,544.00
Arcade Cotton Mills	4 %	200,000§	16,000.00
Avondale Mills	15 %*	600,000‡	360,000.00
Avondale Mills	4 %	250,000§	20,000.00
Beaumont Mfg. Co.	5 %	200,000‡	20,000.00
Beaumont Mfg. Co.	3½%	200,000§	14,000.00
Belton Mills	3½%	1,088,000§	75,160.00
Bibb Mfg. Co.	1½%*	20,000,000‡	17,000.00
Bibb Mfg. Co.	3 %	5,000,000§	300,000.00
Brandon Mills	4 %†	957,000‡	95,700.00
Brandon Mills	3½%	500,000§	35,000.00
Calhoun Mills	2 %*	1,000,000‡	80,000.00
Cannon Mfg. Co.	1½%†	10,000,000‡	800,000.00
Chadwick-Hoskins Co.	2 %*	3,000,000‡	240,000.00
Chadwick-Hoskins Co.	4 %	800,000§	64,000.00
Chesnee Mills	5 %	394,900‡	39,490.00
China Grove Cotton Mills Co.	5 %	1,600,000‡	160,000.00
Chiquola Mfg. Co.	5 %†	358,000	53,700.00
Chiquola Mfg. Co.	3 %	359,000§	21,480.00
Clifton Mfg. Co.	4 %	2,500,000‡	200,000.00
Clinton Cotton Mills	4 %	350,000‡	28,000.00
Columbus Mfg. Co.	1½%*	1,400,000‡	84,000.00
Courtenay Mfg. Co.	4 %	500,000§	40,000.00
Cowpens Mills	3½%	400,000‡	28,000.00
Cowpens Mills	4 %	100,000§	8,000.00
D. E. Converse Co.	3½%†	1,000,000‡	85,000.00
Dacotah Cotton Mills	5 %	600,000‡	60,000.00
Dallas Mfg. Co.	3 %	1,500,000‡	90,000.00
Darlington Mfg. Co.	2½%	500,000‡	25,000.00
Darlington Mfg. Co.	3½%	500,000§	35,000.00
Drayton Mills	3½%	350,000§	24,500.00
Dunean Mills	1¾%	1,000,000§	35,000.00
Efird Mfg. Co.	5 %	1,500,000‡	150,000.00
Eagle & Phoenix Mills	3 %	500,000§	30,000.00
Enoree Mills	1¾%	723,200§	30,900.90
Exposition Cotton Mills	1¾%*	1,200,000§	84,000.00
Exposition Cotton Mills	2 %	387,800‡	15,512.90
Erwin Cotton Mills	1½%*	2,000,000‡	120,000.00
Gainesville Cotton Mills	4 %	490,000‡	43,248.00
Georgia-Kincaid Mills	2 %*	1,200,000‡	96,000.00
Georgia-Kincaid Mills	3½%	900,000§	63,000.00
Glenwood Cotton Mills	2 %*	1,200,000‡	96,000.00
Grendel Mills	3½%	750,000§	52,500.00
Hamrick Mills	5 %	500,000‡	50,000.00
Hartsville Cotton Mills	3½%	750,000‡	52,500.00
Highland Park Mfg. Co.	5 %	1,779,000‡	177,900.00
Highland Park Mfg. Co.	3 %	348,600§	20,916.00

*Quarterly. †Extra. ‡Common. §Preferred. Brandon Mills, 1% extra; Cannon Mfg. Co., 2% extra; Chiquola Mfg. Co., 5% extra; D. E. Converse Co., 1½% extra; Exposition Cotton Mills, 3% extra).

(Continued on Page 44)

CLASSIFICATION OF SOUTHERN MILLS

In the tables given below, an accurate tabulation of the spinning, weaving and knitting mills in the Southern States is shown, together with their equipment. The mills are grouped according to their equipment and product. Mills that spin only are grouped accordingly and the same is true of the mills that spin and weave, spin and knit, knit only and weave only. The table also gives the number of mills in each State, the number of spindles, looms and knitting machines, and the total figures, by States and for the whole South.

The convenient arrangement of the tables clearly shows each division of the mills, together with their equipment. The information contained in the tables is compiled from Clark's Directory of Southern Textile Mills, January 1, 1928.

STATE	SPINDLES						LOOMS				KNITTING MACHINES				Total Mills	Total Spindles	Total Looms	Total K. M.
	Spin Only		Spin & Weave		Spin & Knit		Spin&Weave		WeaveOnly		Spin & Knit		Knit Only					
	Mills	Spindles	Mills	Spindles	Mills	Spindles	Mills	Looms	Mills	Looms	Mills	K. M.	Mills	K. M.				
Alabama	35	366,726	41	1,228,477	3	29,584	41	28,027	2	240	3	560	14	1,975	95	1,612,332	28,267	2,535
Arkansas	2	16,240	2	22,500	1	10,000	2	263	—	—	1	80	—	—	6	48,740	263	80
Florida	—	—	—	—	—	—	—	—	—	—	—	—	1	19	1	—	—	19
Georgia	42	547,562	98	2,539,738	9	77,264	98	57,028	8	500	9	2,922	35	5,539	198	3,162,364	57,528	8,461
Kentucky	5	39,040	2	54,040	—	—	2	1,384	1	68	—	—	10	1,377	19	90,080	1,452	1,377
Louisiana	—	—	3	95,000	1	8,000	3	2,465	—	—	1	500	2	217	6	103,000	2,465	717
Mississippi	2	6,784	12	163,544	1	5,000	12	4,713	1	90	1	400	2	90	18	175,328	4,803	490
N. Carolina	215	2,603,350	151	3,562,038	14	269,060	151	90,273	44	4,684	14	3,831	155	23,429	579	6,388,160	94,957	27,260
Oklahoma	—	—	2	30,912	—	—	2	558	—	—	—	—	—	—	2	30,912	558	—
S. Carolina	31	289,234	134	5,187,176	2	11,156	134	134,372	10	638	2	248	11	1,176	188	5,476,910	135,010	1,424
Tennessee	11	171,064	14	351,920	8	125,720	14	8,356	3	576	8	1,716	70	13,924	106	648,704	8,932	15,640
Texas	5	38,336	23	244,128	—	—	23	6,368	—	—	—	—	5	247	33	282,464	6,368	247
Virginia	3	18,000	13	702,792	—	—	13	19,407	12	1,760	—	—	29	4,700	57	720,792	21,167	4,700
Total	331	4,096,336	495	4,179,265	39	535,784	495	353,214	81	8,556	39	10,257	334	52,693	1,308	18,739,786	361,770	62,959

Alabama—One mill spins, weaves and knits. Georgia—One mill spins, weaves and knits. North Carolina—Two mills spin, weave and knit. South Carolina—One mill spins, weaves and knits. South Carolina—One mill knits and weaves.

Record Cotton Consumption in 1927

DURING the past calendar year the world has given a startling demonstration of its capacity for consuming American cotton. In this period it has spun about 16,600,000 bales, exclusive of linters. This is by far the largest consumption in any twelve month period in history. It compares with about 14,200,000 in the calendar year of 1926 and with a maximum consumption in any past coton season of 14,400,000, in the 1911-1912 season, says the Garside Cotton Service.

The big consumption the past year is the result of a price of 12c to 14c a year ago, a short Indian crop, general prosperity in the United States, the recovery of Europe and the continued industrial expansion of Japan. Of the increase of 2,400,000 over the previous year, about 900,000 was due to the substitution of American cotton for Indian because of the relative scarcity of Indian. The other 1,500,000 increase was due to increased demand for yarn and cloth in this country, Europe and the Orient.

Cotton Deluge Threatened at Start

A year ago the world seemed to be deluged with the American staple. Starting the season on the first of the previous August with a normal carry-over of 5,501,000 bales, this country produced the largest crop on record, 18,046,000 bales, inclusive of city crop, making a total supply of 23,547,000. The previous year the carry-over at the beginning of the season was only 3,380,000 and the crop 16,131,000, making the total supply only 19,511,000. Two years previous the carry-over was only 2,711,000 and the crop 13,980,000, making a total supply of only 16,691,000. Three years previous the carry-over was only 3,318,000 and the crop 10,310,000, making the total supply the scant sum of 13,628,000.

Never before had the supply from one season to the next been increased by such staggering amounts. As compared with one year previous, the supply was 4,000,000 bales larger; compared with two years previous, it was nearly 7,000,000 bales larger; compared with three years previous, it was nearly 10,000,000 bales larger. It was no wonder that the price dropped to one-third of that of three years before, and to the lowest level, with one exception, since pre-war days.

But the very cheapness of the staple was largely responsible for the great expansion in mill activity and the increase of consumption in this country and abroad. Yarn and cloth buyers, realizing that the long decline of the previous three years was at an end and that the next broad movement was bound to be upward, began to buy ahead with increasing confidence. Domestic and foreign mills put more forward business on their books than they had had for several years. This was true of foreign as well as domestic mills. The heavy buying of yarn and cloth set in during the fall and early winter and continued into the spring. In this country it ran into the summer, even when the raw material reached 22 to 24 cents.

Mill Production Runs Ahead.

In this country the heavy buying of yarn and cloths resulted in a scale of mill activity far above the previous maximum. In the calendar year the domestic mills used approximately 7,400,000 bales of all kinds of cotton, of which about 7,100,000 were American, against the previous maximum in any cotton season in peace times of 6,666,000 of all kinds and 6,322,000 of American. The average consumption in the five seasons ending July 31 this past year was about 6,400,000 all kinds and 6,100,000 American. With a consumption of about 800,000 bales more than the previous maximum and 1,000,000 more than the five year average, it is not surprising that the mills were unable to continue selling their full output, and were obliged toward the end of the year to resort to sharp curtailment to avoid accumulating burdensome stocks.

British Consumption Small

It is significant of fundamental conditions in the world cotton trade that England failed to increase its consumption of cotton materially under the favoralbe conditions which prevailed this past year. In the calendar year it spun about 2,100,000 bales of American. This is only about the same as in recent cotton seasons. Fifteen years ago England's consumption of the American staple sometimes totaled as much as 3,500,000 bales in a twelve month period. The theory which prevailed in Lancashire for several years after the war, that the troubles of the English mills were due largely to scarce and high-priced raw material, has been exploded. With the spinners unable to maintain more than a 60 or 70 per cent rate, on cotton costing less than 20 cents, it has become clear to every one that Lancashire's difficulties are due primarily to the loss of a big part of its export trade, through its inability to compete with other countries on certain classes of goods.

European Consumption.

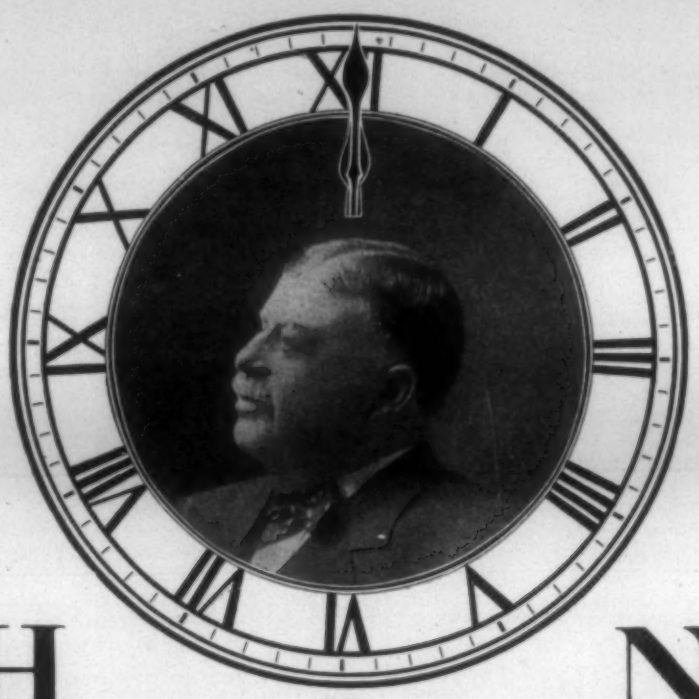
The Continent used about 5,300,000 bales of the American staple. This put that part of the world cotton trade back on a basis equal to the maximum of pre-war times, after the many years of light activity and restricted consumption due to the war and its effects. Immediately following the war, the Continent consumed only about 3,000,000 bales of the American staple. It has steadily increased its consumption as it has stabilized its currencies, reorganized its industries, and rebuilt its credit structure. Its big consumption this past year occurred in the face of the stagnating effects of deflation in France and Italy. Germany, Czecho-Slovakia and Russia rolled up big totals. Perhaps 250,000 bales of the Continent's consumption of American was due to its substitution of American for Indian, but otherwise its heavy spinnings of the American fibers were due to expansion in its mill business and its yarn and cloth trade.

Orient Sets Record.

The Orient, that is, Japan and China, together with India, Canada, Mexico and minor countries used the impressive, unprecedented total of approximately 2,100,000 bales of American during the year. Japan spun about 1,200,000, China 300,000 and India 300,000; Canada, Mexico and minor countries used the balance of about 300,000. Japan and China probably used 350,000 bales of American in place of Indian. The 300,000 bales of American which went to India were practically all in substitution for Indian cotton, although as a matter of fact India's consumption of its own cotton was almost at maximum levels. Japan, with its 1,200,000 bale consumption, is now running a close race with Germany for the position of the third largest user of American cotton. Japan's big increase in consumption in past years goes far to explain England's decreased consumption. It reflects in part Japan's success in taking away from England a sizeable part of the Oriental trade in yarn and cloth.

The consumption of 16,000,000

(Continued on Page 42)



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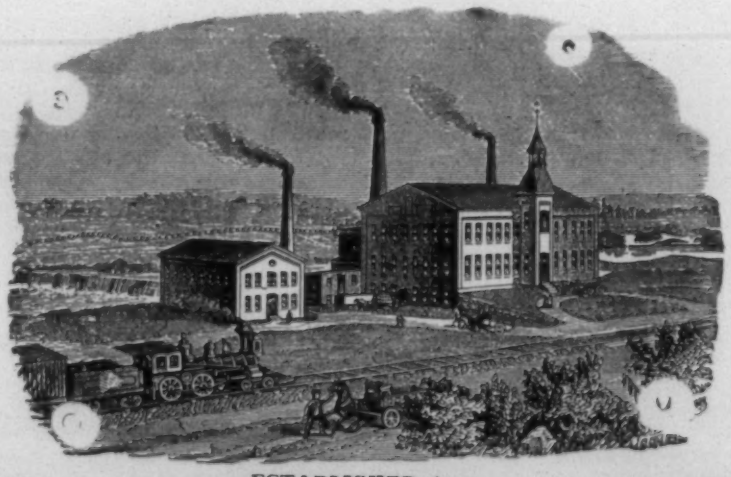


ESTABLISHED 1854

OFFICE
105 WASHINGTON ST.
BOSTON, MASS.

Anti-Friction Bearing Spindle Marks Advance in Spinning

By B. F. Davis, Textile Division, S K F Industries, Inc.

ONE of the keenest subjects of interest to mill management today is more efficient and economical operation in an era of high wages and keen competition. And this subject invariably leads to the consideration of more modern equipment to secure advantage in manufacture which will absorb the initial outlay in a short period and then pay fair dividends in the future. The application of cotton in many new fields has also presented to engineers many new problems to be solved.

The machine which has always been of great interest in the minds of mill men is the spinning frame. It is obvious that a spinning frame with about 200 to 250 spindles, and having a total of about 300 bearings, would be an ideal object for anti-friction bearing application Engineers as well as mill men have visioned the numerous advantages to be derived with the reduction of friction on the spindles. These are by far the most important as they directly affect the quality and quantity of the finished product. In addition, they also consume about 60 per cent of the total power input.

For years, considerable experimental and research work has been carried on in this direction. Until the present time, the difficulties presented by an application of this type could not be overcome due to the unfavorable conditions under which a spindle operates.

To illustrate some of the difficulties presented, we may briefly consider actual service conditions. Spindles of a ring spinning frame revolve at speeds which are probably not reached by any other machine or machine part in continuous operation year after year. Furthermore, the load imposed on a spindle is of an unfavorable nature because the yarn has to pull the traveller around the ring at a speed exceeding sometimes 1700 yards a minute. The air resistance on yarn and travellers causes uneven distribution of the load The bobbin also changes its center of gravity at each up and down motion of the ring rail.

The pull of the spindle bands or tapes also presents many difficulties. This pull is quite high for the rather small bolster making it necessary to set the neck bearing on the same level with the whorl in order to reduce the stress.

It becomes readily apparent that the application of anti-friction bearings to spinning spindles was therefore particularly difficult first, because the bearing must be made rugged in order to secure long life and reliable service second, the bearings must be made small enough to be housed in the limited space available in the inside of the whorl.

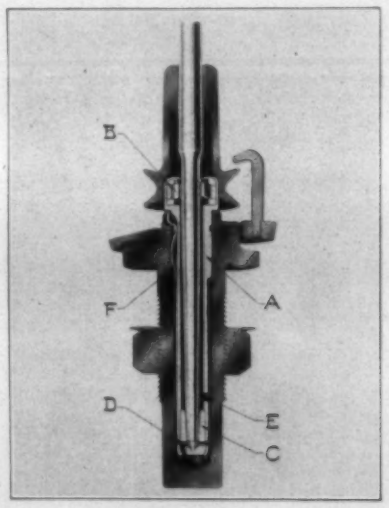
The limitations imposed by the second requirement precluded the successful application of ball bearings. While installations using one or more rows of balls showed power saving of from 25 to 35 per cent, they usually proved unsatisfactory and were abandoned after a short time. The reasons were that the bolster head in which the neck bearing was housed could not be mounted into the whorl, or if it was small enough to fit, it was not strong enough to resist the load imposed upon it.

Years of intensive testing and research work with all existing types of anti-friction bearing spindles made evident to S K F engineers that the correct solution of the problem would be found through the use of a small roller bearing. Subsequent laboratory and actual service conditions have proven their choice correct.

The S K F spindle can be defined as a flexible rabbeth spindle. In its construction all technical improvements were incorporated and the smallest details and problems were subjected to long and close study. The outer apearance and dimensions of the S K F spindle are similar to the types of plain bearing spindles in common use. As a rule, no changes are necessary to fit S K F spindles on existing frames.

The only difference between the S K F spindles and existing spindles lies in the bolster. Instead of the old iron bolster, in the S K F spindle we have a steel bolster in which neck and step bearing are rigidly mounted.

In the photograph representing the cross section of a spindle equipped with S. K. F. roller bearing bolster we indicate with:



A—The bolster sleeve.
B—The neck bearing.
C—The step bearing
D—Lower Lubrication hole.
E—Upper lubrication hole.
F—Spring.

A—The Bolster Sleeve.

The S K F roller bearing bolster forms a complete unit in which neck and step bearing are rigidly mounted and securely held in place.

Neither one of these bearings can be removed from the bolster.

The steel sleeve forming the bolster is made of high grade chrome-steel to very closed tolerances.

Because of this method the bolsters are standard and can therefore be replaced regardless of date of manufacture.

B—The Neck or Roller Bearing

The construction of the neck bearing can easily be seen in the photograph.

The outer race is made of high chrome steel, hardened throughout, ground, and securely held in place at the top of the sleeve.

The cylindrical rollers are guided between parallel flanges and spaced by a solid bronze retainer. The retainer is designed in such a way that when the blade is removed from the base, the rollers are held in place.

The inner race is formed by the blade itself. That part of the blade on which the roller rotates is perfectly cylindrical and properly hardened and ground.

The line contact of roller with spindle blade and outer race provides for maximum capacity within the limited space and guarantees smooth running at any speed.

C—The Step Bearing.

The step bearing is a plain bearing made of glass-hardened alloy steel.

By making the included angle of the step bearing larger than the taper of the blade, friction and the resulting wear were eliminated. This also provided for ample and easy circulation of lubricant.

The lower end of the blade is also glass hardened and ends in a ball point. This provides enough surface to take care of the load of the whole spindle.

D and E—Upper and Lower Lubrication Holes.

The lubrication of the spindle is doubtless the most important factor in keeping a spindle in good condition and to obtain a good product.

When designing the S. K. F. Roller bearing bolster great care was taken to improve the lubrication and to eliminate the uneconomical oil pumping which prevails in the plain bearing spindle.

In the plain bearing spindle the oil is always pumped up between the spindle blade and the inside of the bolster. It is obvious that a considerable amount of power is wasted by this pumping action. In addition to this the oil reaching the upper open end of the bolster can be thrown out.

A small amount of the oil thrown out in this way may run down on the outside of the bolster and back into the oil reservior. The greater part of the oil, however, is lost and has to be replaced every two weeks.

A more economical oil circulation takes place in S K F roller bearing bolsters.

When starting the machines a considerable amount of oil is taken up by capillary attraction between blade and bolster and thrown into the roller bearing. The well sealed end of S K F bolster, however, does not permit any oil leakage and the excess lubricant within the roller runs down on the inside of the bolster and back to the oil reservior.

At uniform speed a very fine oil film is always taken up into the roller bearing. The principal oil circulation, however, is confined between the upper and lower lubrication holes, i.e. to say between C and D.

The advantages of this lubrication are:

1. No power wasted for oil pumping
2. Oil remains cool and bases of S K F spindles are much cooler than bases of plain bearing spindles
3. No dirty floor, nor frames
4. One lubrication lasts over 3500 running hours.

F—Spring.

The spring is of very simple construction making a replacement possible in a few seconds.

The elasticity of the spring allows so much play to the bolster that the axis of rotation is at all times in the center of gravity avoiding in this way vibration even when the spindle is running at very high speed.

Power Saving.

Power saving in mills is not only important because of the reducing of the power bill, but also because smaller motors can be used. Especially in new equipment the purchasing of smaller motors means a reducing of the investment in power equipment.

The use of S K F roller bearing spindles has always led to a considerable power saving, and, taking as a base tests made in the various cotton mills where S K F roller bearing spindles are used, we can say that the power saving ranges from 25—35 per cent according to the conditions of mill and machines.

Believing that these tests might be of some interest for everyone in connection with spinning, we are listing below the results of one of these tests recently made in a large New England mill.

The test was conducted on the same frame, first with plain bearing spindles and afterwards with S K F spindles.

Both types of spindles were therefore running under absolutely the same working conditions.

A frame equipped with 272 plain bearing spindles required 7.38 H. P.

The same frame equipped with S K F roller bearing spindles requires

5.10 H. P.

2.28 H. P. saved.

Percentage of Power Saved 30.89.

Dividing in both cases the number of spindles by the H. P. required we obtain the number of spindles driven by 1 H. P.:

$\frac{272}{7.38}$ = 36.70 plain bearing spindles

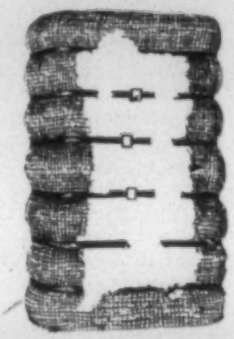
$\frac{272}{5.10}$ = 53.33 S K F roller bearing spindles

The power saved on one spindle equals

$\frac{2.28}{272}$ = .00838 H. P.

As a matter of curiosity every

(Continued on Page 45)



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JUNIUS M. SMITH — *Business Manager*

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Our Annual Review

CLARK'S Annual Spindle Increase list shows that during 1927 the increase in cotton spindles in the South was 565,500 as compared to only 343,800 in 1926.

The increase was larger than we anticipated but a very large portion of same is represented by spindles moved from other sections to the South.

The 1927 increase by States was

Spindles Installed

Alabama	134,928
Arkansas	10,000
Georgia	180,688
Louisiana	5,000
North Carolina	116,324
South Carolina	90,244
Tenessee	17,000
Texas	11,316
Total in South	565,500

The record of Southern spindle increases for recent years has been:

1912	803,882
1913	435,300
1914	329,410
1915	340,886
1916	619,682
1917	546,168
1918	319,546
1919	425,844
1920	663,446
1921	298,328
1922	285,868
1923	730,812
1924	400,848
1925	530,396
1926	343,800
1927	565,500

Our list of spindles already purchased for installation during 1928 is the smallest of the past fifteen years:

Spindles to be Installed

Alabama	7,000
Arkansas	5,000
Georgia	40,000
North Carolina	21,580
South Carolina	54,368
Texas	5,000
Total for South	132,948

As a new feature of our Annual Review Number we have compiled the following list of looms installed during 1927:

Loom Increase

Alabama	1,250
Arkansas	60
Georgia	4,047
Louisiana	36
North Carolina	3,326
Oklahoma	50
South Carolina	2,898
Tennessee	64
Texas	100
Virginia	1,001
Total	12,832

The increase in knitting machines during 1927 was remarkable and reached a total of 7,191, the largest increase being in North Carolina as shown below:

Knitting Machine Increase by States

Alabama	465
Florida	19
Georgia	1,075
Kentucky	92
Louisiana	28
Mississippi	40
North Carolina	3,571
South Carolina	120
Tennessee	1,017
Texas	49
Virginia	715
Total	7,191

According to our tabulation, there were in the South on January 1st, 1928:

Spindles	18,739,786
Looms	361,770
Knitting machines	62,950

During 1927 there has also been a considerable increase in the number of finishing and dyeing plants and bleacheries.

From the standpoint of increase in Southern textile equipment 1927 was very satisfactory.

Spindle Hours

ON page 18 of this issue we are publishing a comparison of cotton spindle hour statistics from August, 1921, to December, 1927, inclusive, and we believe that these tables are worthy of careful and serious study.

The highest number of cotton spindles shown to have been in place was 37,936,784 in July, 1925, and since that time there has been a steady decline, which shows that mills dismantled in New England contained more spindles than the new mills or additions in the South.

In December, 1927, total spindles in the United States was 36,494,000 as compared to 36,725,000 in December, 1921. During the six-year period the population of the United States has increased at least 10,000,000.

From 20,775,000 spindles in December, 1921, Northern spindles have declined to 18,094,000 in December, 1927.

During the same period Southern spindles have increased from 15,949,000 to 18,399,000.

A more vital figure than the number of spindles is the number of active spindles, and we will use October statistics rather than those of December, because it is a more normal month.

In October, 1921, there were in the United States 34,221,000 active spindles, whereas six years later, October, 1927, there were only 32,497,000 spindles in operation.

In spite of the fact that there were very nearly 2,000,000 less cotton spindles active in October, 1927, the total spindle hours were 8,704,511,000 as against 7,583,342,000 in October, 1921.

The fact that 2,000,000 less spindles produced 1,121,000,000 more spindle hours can only be accounted for by the increase in night work.

The highest number of active spindles was 35,515,000 in April, 1923, and the lowest was 28,710,000 in July, 1924, when there were 9,076,000 idle spindles.

The highest number of spindle hours was 9,628,990,000 in March, 1927, whereas the lowest was 5,157,779,000 in July, 1924. This ability to practically double the spindle hours is the weakness of the cotton manufacturing industry today.

The Northern States had 1,773,030 idle spindles in October, 1921, as against 3,565,000 idle in October, 1927. In July, 1924, their idle spindles, which does not include those that were operated on short time, reached 7,252,000.

The South had 455,000 idle spindles in October, 1927, as against 438,000 in October, 1921.

Their idle spindles went down to 263,000 in January, 1923, and reached their high point of 1,963,000 in August, 1924.

Spindle hours in Northern mills were 3,008,174,000 in October, 1927, which was less than the spindle hours of October, 1921, which were 3,752,537,000, and it is therefore evident that there has not been any large increase in night operations in New England.

On the other hand, Southern mills, with 15,405,000 active spindles in October, 1921, had 3,830,504,000 spindle hours, while 17,770,000 active spindles in October, 1927, produced 5,696,336,000 spindle hours.

The average hours each Southern spindle operated in October, 1921, was 249, but it was 312 in 1927, and the increase can only be attributed to the increase in night operations.

The lowest number of hours per spindle for the South was 192 in July, 1924, whereas the highest was 337 in March, 1924.

The ability to expand from the operation of spindles from 192 to 337 hours per month with its consequent increase in production explains the manner in which any increase in the demand for cotton goods has been equalized by more spindle hours and more production.

While we are giving the statistics for the three leading cotton manufacturing States of New England, they can not be held responsible for the overproduction, and we must turn to four Southern States for a determination of the major responsibility.

Alabama was operating 1,247,000 spindles in October, 1921, and showing 293,611,000 spindle hours, or 235 hours per spindle.

In October, 1927, Alabama was operating 1,539,000 spindles with 448,177,000 spindle hours, or 291 hours per spindle.

With only approximately 200,000 spindles increase they had increased their spindle hours per month 154,566,000 and their average hours per spindle from 235 to 291.

Georgia had 2,503,000 spindles in October, 1921, and was getting 592,113,000 spindle hours, or 237 hours per spindle.

In October, 1927, Georgia was operating 421,000 more spindles, or 2,924,000 spindles, but getting 886,751,000 spindle hours, or 294 hours per spindle.

This shows that with an increase of only 421,000 spindles they had increased their spindle hours per month by 294,638,000 and their average spindle hours from 237 to 294.

North Carolina was operating 5,086,000 in October, 1921, and getting 1,339,156,000 spindle hours, or 263 hours per spindle.

In October, 1927, North Carolina was operating 6,052,000 spindles and had increased the spindle hours to 1,978,700,000. The hours per spindle had increased from 256 to 319.

South Carolina had 4,940,000 spindles operating in October, 1921, and was getting 1,225,716,000 spindle hours, or 248 hours per spindle.

In October, 1927, South Carolina had made a comparatively small increase to 5,331,000 spindles but had increased her spindle hours to 1,837,327,000, or 340 hours per spindle.

(Continued on Page 42)

Personal News

Walter Dilling has been elected vice-president of the Cora Mills, Kings Mountain, N. C.

Dr. O. G. Falls has sold his interest in the Cora Mills, Kings Mountain,N. C., and retired as president and treasurer.

A. G. Meyers, of Gastonia, has purchased controlling interest in the Cora Mills, Kings Moutain, and will be president and treasurer.

A. L. Draper, of Troy, N. Y., is president of the new W. H. Draper Company, sash cord manufacturers, Rocky Mount, N. C.

D. C. Collier has been elected president of the Southern Manufacturing Company. Athens, Ga., succeeding the late Billing Phinizy.

J. R. Puckett, from Akron, Ohio, has become overseer of night carding at the Fountain Cotton Mills, Tarboro, N. C.

C. B. Williams, formerly of Hope Mills, has been appointed superintendent of the new sash cord plant of W. H. Draper & Co., Rocky Mount, N. C.

Alton Parks has resigned as master mechanic at the J. W. Sanders Cotton Mills, Starkville, Mass.

Ernest Tumblin has been appointed master master mechanic at the J. W. Sanders Cotton Mills, Starkville, Mass.

W. T. Swann, of Danville, Va, has become overseer of the cloth room at the Caraleigh Mills, Raleigh, N. C.

J. E. Baker has been promoted to overseer weaving at the Pilot Division, Consolidated Textile Corporation, Raleigh, N. C.

Winder Gary has been promoted from assistant superintendent of the Ware Shoals Manufacturing Company, Ware Shoals, S. C.

Herbert A. Burough has become superintendent of the Bonham Division of the Consolidated Corp., Bonham, Texas.

W. C. Wesson has resigned as overseer spinning at the Dallas-Novall Yarn Mills, Dallas, Ga., to become overseer carding at the Caroline Mills, Carrollton, Ga.

James H. Porter, vice-president of the Bibb Manufacturing Company, Macon, Ga., has recovered sufficiently from a recent illness to again be at his office.

J. D. Bailey, of the Draper Corp., has finished starting up 450 new Northrop looms at the Apalache plant of the Victor-Monaghan Company, Arlington, S. C., and is now starting up 250 new looms at the Victor plant, Greer, S. C.

J. V. Thomason has become night overseer of weaving at the Fountain Mills, Tarboro, N. C.

T. J. Wallner has been elected president of the Cavalier Hosiery Mills, Pulaski, Va.

E. S. Jesse, who recently resigned as superintendent of the Watts Mills, Laurens, S.C., is reported to be interested in establishing a new weave mill at Laurens.

H. A. Vestal, manager of the Chilowee Mills, Athens, Tenn., will continue to manage consolidated operations of the Vestal and Fashion Mills, recently merged.

J. L. Beaver has resigned as overseer of weaving at the Pilot Division of the Consolidated Textile Corp., Raleigh., N. C., and accepted a similar position with the Cascade Mills, Mooresville, N. C.

William C. Cobb, who has been superintendent of the Ware Shoals Manufacturing Company since 1905 has retired from active service. He has for many years been one of the best known mill superintendents in the South and has an enviable reputation as an efficient manufacturer.

Roy Dallis.

LaGrange, Ga.—Roy Dallis, prominent mill man of this city died last Thursday morning. He was 55 years old.

He became connected with Elm City Cotton Mills when it first began operation in 1905 and served as manager for almost a score of years. Several years ago, Mr. Dallis was made consulting engineer for the Callaway organization and held that position until his death. He was vice-president of Elm City Cotton Mills and Manchester Cotton Mills. He was a director of Unity Cotton Mills, Elm City Cotton Mills, Hillside Cotton Mills, and the LaGrange National Bank.

W. D. Shields Now With Butterworth Organization

H. W. Butterworth & Sons Co, Philadelphia, Pa., manufacturers of textile finishing machinery, have added another man to their Southern force. He is W. D. Shields, who brings with him a knowledge of dyes and the dyeing of practically all kinds of fabrics. He will operate from Charlotte, N. C., where the Southern office is located in the Johnston Building.

Mr. Shields has specialized on the dyeing of hosiery, having been connected with the Durham Hosiery Cotton Mills at Durham, N. C., and Mills. He was also with the Erwin is a graduate of the North Carolina State College, class 1919.

Following the Butterworth policy, Mr. Shields's knowledge of finishing, dyes and dyeing is now available in the textile industry.

MILL NEWS ITEMS OF INTEREST

Wadesboro, N. C.—The Wade Manufacturing Company is erecting 14 new houses in the mill village.

Winston-Salem, N. C. — O'Brien Hosiery Mills Company, capital stock $200,000, has been incorporated by W. L. and L. A. O'Brien. The company expects to build a hosiery mill.

Abbeville, S. C.—The new drapery mill to be located here will be built on the ball park grounds, according to Sidney M. Edelstein, industrial agent for the city of Abbeville. The work of construction will start as soon as site and plans are formally approved by the manufacturing company moving here.

Rocky Mount, N. C.—W. H. Draper & Co. are starting up their new plant here which will produce braided sash cord. The machinery is being moved from Troy, N. Y. The equipment includes 1,000 spindles and 114 braiders. A. L. Draper, of Troy, N. Y., is president; R. L. Huffines, of Rocky Mount, manager, and C. B. Williams, formerly of Hope Mills, N. C., is superintendent.

Thomson, Ga. — The Lullwater Manufacturing Company has completed removing the Draper looms formerly operated at its plant in East Point, Ga., to the plant here and are now getting them started. This will considerably increase production at the local plant, which is operating on high count drills and 4.00 yard sheetings exclusively. Officials report a very encouraging outlook for the coming year.

Honea Path, S. C.—Sub-contracts for work on the extension to the Chiquola Manufacturing Company have been awarded to Greenville Steel and Foundry Company for structural steel; David-Lupton Sons Construction Company for steel sash; American cast iron pipe company for cast iron columns; J. A. Piper Roofing Company for roofing. Gallivan Construction Company are the general contractors. The extension, 131 feet 4 inches by 130 feet, four stories, will house 5,000 spindles additional.

J. E. Sirrine & Co. are the engineers.

Belmont, N. C.—The annual stockholders' meeting of both the Perfection Spinning Company and the Linford Mills, Inc., were held at the offices of these companies. In the reports a good showing was made, and each company paid the usual five per cent semi-annual dividend. These mills have run steadily throughout the year, with no curtailment. The president of each of them is A. C. Lineberger. D. P. Stowe is secretary and treasurer of the Perfection Spinning Company, and J. E. Ford is secretary and treasurer of the Linford. The officers and board of directors were re-elected for the ensuing year.

Laurens, S. C.—It is reported that a new textile weave mill is to be added to the industrial plants of Laurens. E. G. Jessee, until recently superintendent of the Watts Cotton Mills, is said to be promoting the new weave mill project.

Lenoir, N. C.—The annual meeting of the Moore and Whitnel Cotton Mills was held here Thursday morning in the office of the secretary and treasurer. The annual reports were very satisfactory and the prospects for 1928 seem to be rather encouraging. All officers were re-elected.

Easley, S. C.—It is understood that the new mill to be built between Easley and Pickens, as reported last week, will be known as the Alice Mills No. 2. A site has been purchased, reports indicate and that plant will be equipped with 40,000 spindles and accompanying looms purchased from a mill that has been operating in New England.

Union, S. C.—Plans have been perfected for the organization of a rayon will to be located here within the next two weeks, it was announced. Three-fourths of the $65,000 announced capital stock has been subscribed and the purchasers are scheduled to meet Thursday to organize the company.

The local Chamber of Commerce was active in effort to bring the mill here and $20,000 of the stock is expected to be purchased by local residents.

Anderson, S. C.—Potter & Shackelford, Inc., contractors, announce that the following sub-contracts have been awarded on the new weaving building for Appleton Manufacturing Company, Anderson, S. C.: Structural steel, F. E. Gorian Company, Atlanta, Ga.; steel sash, Detroit Steel Products Company; roofing, Ramseur & Lee Roofing Company, Greenville; cast iron pipe, American Cast Iron Pipe Company; treating roof plank, Piedmont Wood Preserving Company, Augusta, Ga.

Thirty thousand spindles and 750 looms will be added to present equipment when the new building is complete.

J. E. Sirrine & Co. are the engineers.

Chattanooga, Tenn.—The National Yarn & Processing Co. will enter the rayon bleaching, and dyeing field, according to announcement by T. H. McKinney, president. The executive announced awarding of the contract for a new addition to the plant to take care of this department to Mark K. Wilson Co., well known local contracting concern.

It was intimated that the development may lead to something even more important and possibly into the the establishment of a rayon plant in this city at some future date. The rayon finishing depart-

ment of the concern will have a capacity of about 15,000 pounds of rayon a week.

The new addition will be a two-story brick of mill construction, having a floor space of 100 by 60 feet. The building, together with the new equipment to be bought, will represent an investment of about $75,000.

Knoxville, Tenn.—New machinery is to be purchased with consolidation of the Chilhowee and Fashion Mills at Athens, Tenn. Full fashion machinery will be among that bought. The mill will also manufacture circle knit. The new company will be the Chilhowee Mills Company. In voting to merge, the board of managers of the mills appointed a committee composed of H. A. Vestal, chairman; H. P. Smiley, of Athens, and A. M. Tomlinson, of Chattanooga, to select a building site and direct the construction of the new building. H. A. Vestal, who has been general manager of both mills, will continue as manager of the consolidation.

Laurens, S. C.—The management of the Pioneer Braid Mill, a new $250,000 industry for Laurens, expects to put part of the plant in operation within the next ten days and the full complement of machinery by February 15.

Under the supervision of Henry J. Taylor, superintendent, and Joe Aldman, president of the company, the machines are being placed this week. The mill structure has been completed and electrified, and steam heat was turned into the new building. President Aldman's father, veteran manufacturer of braids and kindred products of such a plant as the Pioneer factory, is here from New York assisting in installing the machinery.

Kings Mountain, N. C.—Dr. O. G. Falls has sold his interest in the Cora Cotton Mill to A. G. Myers, of Gastonia, who is also president and treasurer of the Dilling Mill. The transfer was made Saturday. Dr. Falls resigned as president and treasurer, and Mr. Myers was elected to these offices of the new organization. Walter Dilling was elected vice-president.

Dr. Falls was taken ill in September, and owing to his continued illness, and upon advice of his physicians it became necessary for him to turn from active business.

In the late fall of 1900 the Cora Mill was established by the late Capt. F. Dilling and Dr. O. G. Falls. The capital stock was $100,000 with 5,000 spindles. The mill has doubled itself three times without asking the stockholders for any additional money. At the present time it has 20,800 spindles and has paid the stockholders 190 per cent cash dividends. In other words, it has paid out $190,000 in cash dividends.

Greenville, S. C.—Gallivan Construction Company, general contractors, for the new Renfrow plant at Travelers Rest, S. C., announce that the following sub-contracts have been awarded: Structural steel to F. E. Golian Company, Atlanta, Ga.; steel sash to the W. M. Railey Company, Springfield, Ohio; roofing to J. A. Piper Roofing Company, Greenville, S. C.; plumbing to F. W. Smith Plumbing Company, Greenville, S. C.; cast iron columns to Paul Wright & Co., Birmingham, Ala.

This new textile plant for weaving, bleaching and dyeing is being built by the Woodward-Baldwin interests, and will be operated by A. W. Smith and C. E. Hatch, of Brandon Mills.

J. E. Sirrine & Co. are the engineers.

Dallas, Tex.—Contracts will be let within the next sixty days for the construction of a cotton mill at a cost of $900,000, it was announced by M. J. Norrell, manager of the Chamber of Commerce, after a meeting of local business men who subscribed $200,000 toward the new project which is to be built and operated entirely on local capital. Dallasites interested in cotton milling have worked for a year to obtain such a plant for Dallas in the hope of ultimately building a finishing plant for cotton fabrics.

Athens, Ga.—On January 18th at a meeting of the stockholders of the Southern Manufacturing Company, D. C. Collier, of Barnesville, Ga., was elected president of the company, succeeding the late Billings Phinizy. The Southern Manufacturing Company is one of the largest manufacturers in the South of canton flannels and similar styles of woven goods. The machinery consists of 33,500 spindles and 700 looms.

J. C. and D. C. Collier formerly operated the Collier Mills, Inc., at Barnesville and Macon, Ga., most successfully for a long term of years; and in addition are now sole owners of the Eatonton Cotton Mills, Eatonton, Ga.

Seek To Buy American Yarn and Processing Co.

Options are being sought upon all of the common stock of the American Yarn & Processing Co., of Mount Holly, N. C., it is understood. The price offered for the options being reported as $73 per share.

The report further states that options have already been given on the controlling stock, owned by C. E. Hutchinson and associates. The company has a capital of $2,289,000. No intimation as to the identity of the prospective purchasers has been made.

The American Yarn & Processing Co., operates six yarn mills with a total of 57,000 spindles and a large mercerizing plant. All are located at Mount Holly except one yarn mill. Mr. Hutchison, the president, is one of the best known manufacturers in the South, and a former president of the American Cotton Manufacturers' Association.

Annex To Textile Hall

Greenville, S. C. — The two story permanent steel and concrete annex to Textile Hall is now under process of construction and will be finished with a few weeks, it was announced by William G. Sirrine, president of Texile Hall Corporation.

The annex will measure 60 by 200 feet and will furnish approximately 24,000 square feet of additional floor space for the various expositions and conventions for which the hall is used.

The annex is being built entirely of steel, with concrete floors. Actual construction work will be finished by next week, and the painting will follow.

Silk Culture Unsatisfactory

Cairo, Egypt. — Experiments with silk worm culture in Egypt have produced rather dismal results, due largely to a lack of the mulberry trees which are fertile pasture for the cocoons. It also has been found that the climate breeds in the trees pests which are injurious to cotton and it is believed probable that the government will not permit further planting of the trees, hoping thereby to protect the staple cotton crop.

SPINDLE HOURS

(Continued from Page 38)

Between August, 1921, and December, 1927, South Carolina had its low point in August, 1924, with 1,146,799,000 spindle hours and had risen in November, 1927, to 1,902,860,000 spindle hours.

The following table gives a comparison of the above:

Monthly Reports of Active Spindle Hours.
(000s omitted)

	Oct., 1921	Oct., 1927	Minimum Month Aug., 1921 to Dec., 1927	Maximum Month Aug., 1921 to Dec., 1927
Alabama	293,611	448,177	251,485	471,764
Georgia	592,113	886,751	509,501	951,975
South Carolina	1,225,716	1,883,933	1,146,745	1,902,860
North Carolina	1,339,156	1,978,700	1,072,533	2,141,112
Massachusetts	2,004,460	1,583,472	1,009,729	2,305,830
Rhode Island	526,734	419,749	271,500	679,827
New Hampshire	274,004	247,621	32,085	278,266
Southern States	3,830,725	5,696,336	3,298,668	6,099,379
Northern States	3,752,837	3,008,174	1,859,111	4,414,468
United States	7,583,342	8,704,511	5,157,779	9,626,980

These figures show that, since August, 1921, the high point of spindle hours in each of the four leading cotton manufacturing States of the South has been approximately twice the low point.

The ability to expand production in any such manner by the simple and comparatively easy method of putting spindles on night operation is not healthy.

A study of the spindle hours by months will show numerous fluctuations, and by comparing such increases with the margin of profit during such months it will be found that an increase in spindle hours has met every increase in margin and the increase in production has usually been enough to equalize the demand and wipe out the profit.

We have compiled these spindle hours statistics for the purpose of giving the cotton mills of the South a picture that would explain the failure of the industry as a whole to make reasonable profits in recent years.

Are the mill men of the South willing to face this picture honestly and fairly and take steps to correct the evil that it discloses?

It is up to the cotton manufacturers of the South and the solution of the problem is in their hands.

Record Cotton Consumption in 1927

(Continued from Page 34)

bales of the American staple this past year seems phenomenal at first sight. It does not look so extremely large, however, when two facts are borne in mind; first, about 900,000 bales of this was in substitution for Indian, due to the shorter Indian crop; secondly, away back in pre-war days, in the 1911-12 cotton season the world used 14,400,000 bales of American cotton. Deducting the 900,000 substituted for Indian, the world used 15,700,000 bales of American this past year. This is only 1,300,000 more than it used sixteen years ago, representing an increase of much less than 1 per cent per year. In pre-war days, the world increased its consumption of American at a very much faster rate than this. A few years from now a consumption of 16,000,000 will not be accounted particularly large.

12,501,845 Bales Ginned

Washington, D. C.—Cotton of 1927 growth ginned prior to January 16, the Census Bureau announced today totaled 12,501,845 running bales including 529,661 round bales, counted as half bales, and excluding linters, compared with 16,616,075 running bales, including 612,746 round bales to that date a year ago and 15,499,893 running bales including 336,988 round bales in 1926.

The 1927 crop is estimated by the Department of Agriculture at 12,789,000 equivalent 500 pound bales. Today's report is the last ginning report until the final canvass is made by the Census Bureau announcement of which will be made March 20.

Ginnings to January 16 by States follow:

Alabama. 1,169,237; Arizona, 81,201; Arkansas, 940,717; California, 80,096; Florida, 17,278; Georgia 1,103,583; Louisiana, 540,799; Mississippi, 1,328,162; Missouri, 105,042; New Mexico, 64,195; North Carolina, 857,697; Oklahoma 979,279; South Carolina, 730,036; Tennessee 339,962; Texas, 4,130,660; Virginia, 28,445; all other States, 5,456.

Textile Chemists Meet

Greensboro, N. C.—The Piedmont Section of the American Association of Textile Chemists and Colorists will make a vigorous effort soon to expand membership beyond the present roster of 150, it was made known at the quarterly meeting here.

Several formal papers on vital subjects in the profession brought forth much discussion and argument, President Barnes, of the Proximity Manufacturing Company, this city, acted as chairman, with Dyer Moss, of the Newport Chemical Co., Greenville, acting as secretary.

Among the papers read were "Methods of Testing Sulphonated Castor Oils for the Determination of their Fatty Content," by Arthur H. Grimshaw, associate professor of dyeing, North Carolina State College; "Some Foolproof Dyehouse Methods," by W. R. Smith, of Raleigh, N. C., a member of the Southern organization of the United Chemical Products Corporation; "Remarks on Rayon Dyeing and Finishing," a short review of recent developments in this field, by T. C. King, superintendent of dyeing, bleaching and finishing, Cramerton Mills, Inc., Cramerton, N. C., and "Bleaching Cotton Piece Goods," by J. T. Yates, superintendent of the Kerr Bleaching & Finishing Works, Concord, N. C.

Charlotte Engineers to Have Textile Meeting.

The Charlotte Branch of the American Society of Mechanical Engineers will hold a textile meeting at 8 p. m., February 9th. The principal speaker will be James W. Cox, Jr., of New York, chairman of the Textile Division of the A. S. M. E. He will speak on "Manufacturing and Finishing Cotton Cloth," covering the subject from the cotton fibre to the finished fabric. His address will be illustrated by moving pictures made under his supervision, at a large Southern mill. The principles of the various processes will be shown through a telephoto lens that magnifies certain small parts of machinery to 50 times the original size.

Mill men and others interested in textiles are invited to attend the meeting.

Southern Textile Association Has Year Of Useful Service

By J. M. Gregg, Secretary.

IN reviewing the work of the Southern Textile Association during 1927, we find that the organization completed a year of increased service and enjoyed real growth in membership and prestige. A large list of new members were added and two new technical divisions were organized. The work of the Association covered a broader scope of usefulness than ever before. Through

J. M. GREGG

the capable leadership of the officers and the men in charge of the technical divisions, the Association compiled and disseminated a great deal of practical and beneficial information for its membership and the mills as a whole.

The Southern Textile Association is an organization of the operating executives, the overseers and superintendents of the Southern cotton mills from Virginia through Texas.

The object of the Association is to conduct meetings whereby these operating executives might come together and discuss their problems and consider new ideas and latest methods of manufacturing.

This increases their efficiency and renders them more valuable to their plants. Thus the whole idea of the Association is service—service to the men themselves and to the industry; and to this end we are continually striving.

The Association is constantly working for lower costs through increased production and at the same time higher quality of product, and we feel that it has been mainly due to the efforts of the Association that the Southern mills have been able to manufacture as cheaply as they have.

We have for our ambition, "The most expert overseers and superintendents in the textile world," and tremely anxious to learn of new methods, new ideas and eager to discuss their own problems and help with the problems of others. Therefore, through these meetings, with the splendid spirit of co-operation and help we must progress, and progressing we are; approaching nearer and nearer our goal, and at the same time enabling our stockholders to receive a greater return on their investment.

At the present time the Association has seven divisions, namely: Eastern Carolina Division, Dyers', Finishers' and Bleachers' Division, Carders' Division, Spinners' Division, Weavers' Division, Master Mechanics' Division and the newly organized Alabama-Mississippi-Lousiana Division; and is affiliated with the Texas Textile Association.

The Alabama-Mississippi-Louisiana Division was organized at the semi-annual meeting of the Southern Textile Association held at Birmingham, Ala., last October. There are quite a large number of very enthusiastic mill men in this new division. In fact, some of the best men in the Association are in this new division, and it seems that they are getting down to some real work and are going to make us all sit up and take notice.

There is a great deal of work which this Association can do, and work which means money to the Southern mills, yet our progress is hindered on account of financial reasons. Realizing the amount of good that this Association does do, it is hard to believe that every mill in the South would not be glad to contribute to the Association an amount equal to $2.00 for their superintendent and $1.00 for their overseers; yet out of the 1,500 cotton mills in the Southern States there are only about 115 contributing to that extent.

In spite of it all we are pushing ahead, and we are going to continue along constructive lines. We are going to be fo service to everyone we possibly can who is connected with the textile industry. We sincerely hope that as time goes on more of our Southern mills will realize what the Southern Textile Association means to them in keeping their manufacturing costs at a minimum and their quality paramount, and will fall in line with the mills who have been following the Association for a long enough time to realize that its work is essential.

The Arkwrights, the research organization of the Southern Textile Association, has received quite a varied list of research work which have been completed by widely known mill men. These tests have been published in all the textile magazines for the benefit of the entire industry, and have been included in the Southern Textile Association Book of Proceedings for distribution to all of its members.

Carders Meet in Columbia.

The Carders' Division of the Southern Textile Association met Wednesday of this week at Columbia, S. C. A large number of members were present and a very successful meeting was held.

The meeting departed from the usual custom of limiting its proceedings to technical discussions. Instead, the time was spent in discussing the question "Qualifications of a Good Overseer." J. O. Corn, chairman of the Division presided.

A full report of the meeting will appear in these columns next week.

Mills Show Good Earnings in 1927

(Continued from Page 30)

MILL	Dividend.	Stock.	Total Dividend 1927.
Inman Mills	3½%	600,000‡	42,000.00
Jackson Mills	4 %	1,920,000§	134,000.00
Judson Mills	1¾%*	1,920,000	113,400.00
Lancaster Cotton Mills	5 %	1,600,000‡	160,000.00
Laurens Cotton Mills	5 %	1,050,000‡	105,000.00
Limestone Cotton Mills	5 %	500,000‡	50,000.00
Locke Cotton Mills	1½%*	593,900‡	35,634.00
Locke Cotton Mills	4 %	500,000§	40,000.00
Martel Mills	1¾%*	1,150,000§	80,500.00
Mills Mill	5 %	264,700‡	26,470.00
Mollohon Mfg. Co.	3½%	825,000§	57,750.00
Monarch Mills	3½%	1,000,000§	70,000.00
Minarch Mills	2½%	1,000,000§	70,000.00
Oakland Cotton Mills	3½%	510,000§	35,700.00
Orr Cotton Mills	4 %	800,000‡	64,000.00
Orr Cotton Mills	3½%	800,000§	56,000.00
Pacolet Mfg. Co.	5 %	2,000,000‡	200,000.00
Pacolet Mfg Co.	3½%	2,000,000§	140,000.00
Pelham Mills	4 %	200,000§	16,000.00
Pickens Mills	2 %*	750,000‡	60,000.00
Piedmont Mfg. Co.	4 %	1,600,000‡	64,000.00
F. W. Poe Mfg. Co.	1½%*	1,400,000‡	84,000.00
Poinsett Mills	3 %	474,000‡	28,440.00
Ranlo Mfg. Co.	5 %	400,000‡	40,000.00
Riverside and Dan River	2½%*	7,500,000‡	750,000.00
Riverside and Dan River	3 %	7,500,000§	450,000.00
Riverside Mfg. Co.	3 %	1,000,000‡	60,000.00
Spartan Mills	4 %	2,000,000‡	160,000.00
Saxon Mills	3 %	900,000‡	54,000.00
Toxaway Mills	2 %*	500,000‡	40,000.00
Victor Monaghan Co.	1¾%*	842,700§	58,989.00
Thomaston Cotton Mills	1⅝%*	3,000,000§	195,000.00
Ware Shoals Mfg. Co.	2 %*	1,000,000‡	80,000.00
West Point Mfg. Co.	2 %*	7,200,000‡	576,000.00
Williamston Mills	2½%*	600,000‡	60,000.00
Winnsboro Mills	2 %*	2,000,000‡	160,000.00
Winsboro Mills	1¾%*	2,000,000§	140,000.00
Wiscasset Mills	5 %	2,600,000‡	260,000.00
Woodruff Cotton Mills	4 %	787,800‡	63,0024.0
Woodside Cotton Mills	4 %	1,763,000‡	140,040.00
Wodside Cotton Mills	3½%	2,263,000§	158,410.00
Total			$11,485,703.00

*Quarterly. †Extra. ‡Common. §Preferred.

South's Industrial Expansion Linked With Power Development

(Continued from Page 26)

sound attitude of legislators, business men and the community in general have also contributed to the development of industry in this section. Other factors that must not be discounted are a wonderful climate, wholesome living and working conditions, and low cost of living.

Industry in the South has already reached a stage beyond the dreams of most of the industrial pioneers of this section. The textile industry in the South for instance has passed New England in the consumption of raw materials and in the output of goods. North Carolina long since passed the State of Massachusetts, formerly the outstanding textile State of the Union, not only in the number of cotton mills but in spindle hours of operation and during the past twelve months South Carolina also has passed the New England commonwealth in spindle hours. The tobacco industry and the furniture industry likewise have taken commanding positions, while other essential industries have also made progress.

In North Carolina, always regarded as outstanding in its agricultural productivity and importance, the otput of industry as long since surpassed in volume and value the output of agriculture. At the same time the industrial development, resulting in the building up of cities, towns and industrial communities, has served to create infinitely greater markets for practically all agricultural products and has made possible and profitable a greater diversification in agriculture,

Beginning of the new phase in our industrial development witnesses not only a far greater diversity in industry but also the establishment of new industries to supply the market which has been created by existing industries, or to supplement the operations of existing industries. For the past few years there has been a notable development in bleaching, dyeing and finishing plants in the textile field. This development is continuing at a rapid pace and will reach its fullest development only when all goods manufactured by Southern textile mills are finished and made ready for the counter in the territory in which they are produced.

Within the textile field there is to be noted a constantly increasing production of fine goods and, more recently, a large increase in the production of textile specialties. The development in this department of the textile industry has but begun.

During the past year, certainly during the past 18 months, the number of silk mills in the South has been doubled, while there has been considerable extension in the number of plants manufacturing or handling rayon.

There has been a tremendous increase in the knitting industry durthe past 12 months. In fact the expansion of the knitting industry has been responsible in a considerable measure for the establishment of several of the new silk mills, most of the increase in both of these lines of industry being in North Carolina and Tennessee. A noteworthy fact in connection with the continued expansion of the knitting industry is the large increase in the number of plants that are manufacturing full-fashioned hosiery. These plants have enjoyed a rapid development and their products do not suffer by comparison with the products of the best Eastern hosiery mills.

Among the industrial enterprises which are being established to supply the industrial markets in this section are plants for the manufacture of tape and braid for use in cotton mills plush, silk brocade, and other materials suitable for use in the furniture industry, plants specializing in the manufacture of cord fabric for use in automobile tires, plants producing supplies and material for textile plants, etc.

The development of industry imposes upon the electric power industry not only the necessity of providing the additional power necessary to operate the new or enlarged industries, but it likewise imposes upon the retail end of the power industry the necessity for providing equipment and current with which to serve the constantly increasing urban population both of these fields the obligation upon the electric power industry brings with it an enlarged opportunity for service to the community, opportunities, by the way, that are cordially welcomed by the power industry which is naturally gratified and pleased at part it is enabled to play in the development and prosperity in this section.

Anti-Friction Bearing Spindle Marks Advance in Spinning

(Continued from Page 36)

reader should multiply the number of spindles in his own plant by .00838.

Another point in connection with power saving, and of great interest to every mill man, is that S K F spindles practically eliminate the starting resistance.

For spinning mills which buy their power this feature may be of interest especially if they have to pay for power by the peak load.

In mills with their own plant smaller motors can be used for two reasons:

1. Because of the power saving of the spindles.
2. Because of the eliminated starting resistance.

In this second case, when calculating the size of motor for spinning frames no safety margin is required to take care of the starting resistance, but the motor can be chosen by the average power required by the frame.

Saving of Lubricant.

The lubrication system in S K F roller bearing bolsters has been explained previously. Tests have also been made in connection with lubrication and spindles are still running after more than 2 years of operations with the original filing.

We, of course, would not advise mills to wait such long time before lubricating, this being only a test to ascertain how long a spindle equipped with S K F roller bearing bolster can run on the original lubrication before starting to give trouble.

S K F roller bearing spindles should be lubricated every 3500 running hours, and only a very high mineral oil should be used.

Cleanliness.

The cleanliness of S K F roller bearing spindles is due to two reasons:

1. To the construction of the bolster avoiding oil leakage.
2. To the reduced lubrication.

Everyone in connection with spinning frames knows how the lubrication is effected and he knows furthermore that with the oil wasted for one spindle two other spindles could easily be lubricated.

The wasted oil accumulates on machines and floor collecting dust and lint and soiling bobbins which shou'd happen to drop on the floor.

The time wasted in cleaning frames and oiling spindles could be used in keeping the top and bottom rollers clean, in promptly piecing broken threads, and in changing creel bobbins at the correct time.

In other words very much could be done to improve and increase the output.

Smooth Running.

S K F roller bearing spindles revolve steadily and without vibration at the highest speed without excessive yarn breakage. The speed is limited only by the travellers, quality of cotton. and counts spun.

Observation made in spinning mills have shown that the yarn breakage is reduced 25 per cent, eliminating completely peculiar shaped or half full bobbins when doffing and in this way, considerably increasing the production.

Smooth running, reduced friction in bearings, low starting resistance, these are all features which improve the quality of yarn and insure an even twist.

S K F Industries. Inc., manufactures the roller bearing bolster only.

All builders of cotton spinning machinery are in position to equip their spindles with S K F roller bearing bolsters.

Paris, France.—Old tapestry will wash like a pocket handkerchief, says Senator Guillaume Chasenet, reporter for the Fine Arts budget, while no way has been found to clean the modern fabric.

Weavers at the famous Gobelins French State factory have 25,000 tints to choose from, as compared with about forty to which their predecessors under Louis XIV were confined.

Index To Advertisers

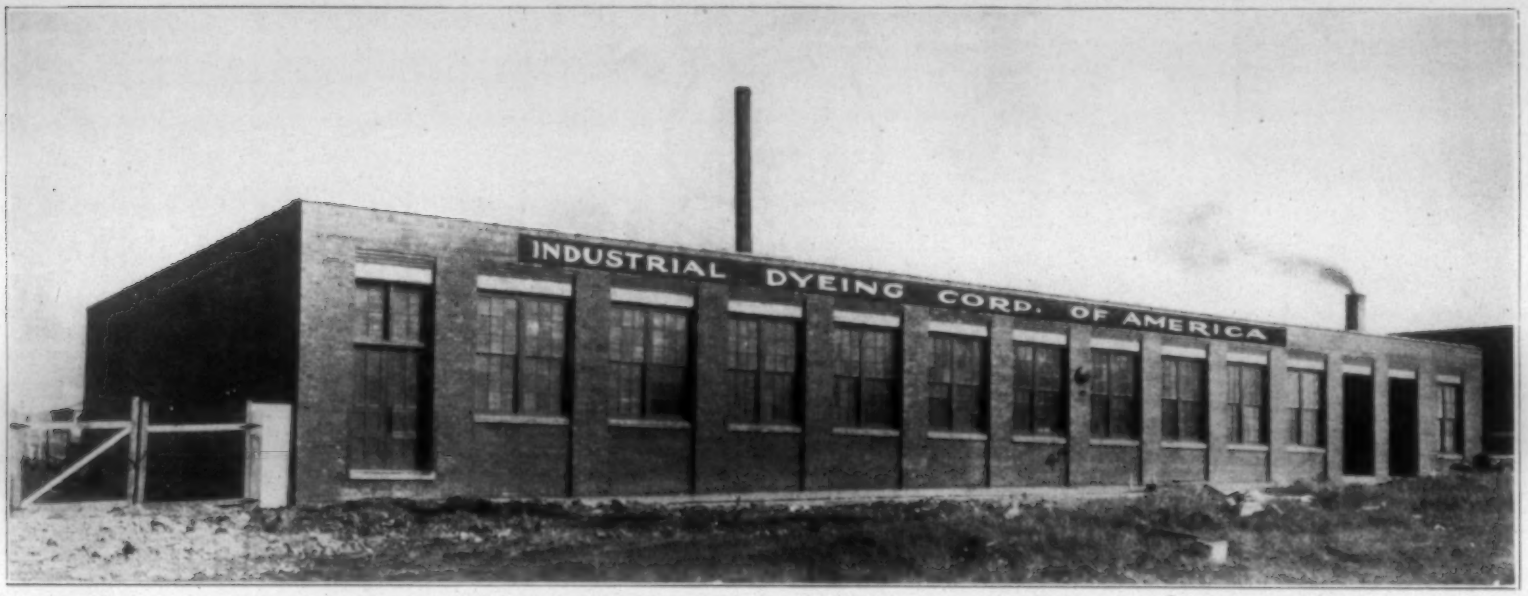
Where a — appears opposite a name it indicates that the advertisement does not appear in this issue.

Knit Goods Output in New England

Knit goods production in New England amounts to $85,000,000 yearly, and the industry employs 20,000 persons, according to a report issued by the New England Council, based on a survey conducted by the Department of Commerce. The Federal Department is now preparing a full report on the industry.

The report from the council goes on to say that the yarns used in the New England knit industry are of wool, silk and other material, and the products include hosiery, underwear, fancy knit goods and knit cloth.

Industrial Dyeing Corporation's Southern Plant



The new Southern plant of the Industrial Dyeing Corporation of America, located at Charlotte, which began operations in December, is handling a steadily growing volume of business and officials express themselves as being very much impressed with possibilities offered them in the Southern textile field.

The Charlotte plant is one of three similar plants controlled by the Industrial Dyeing Corporation. The company operates one plant in New York and another in Pawtucket. These two plants have a large business with the Northern mills. For some time they have also been receiving a great deal of business from Southern mills. Decision to locate a plant in Charlotte was due to a desire to establish a closer personal contact with the Southern clients and also to offer more Southern mills a quality rayon dyeing service.

The plant at Charlotte is equipped with the latest type machinery and is being operated upon a very efficient basis. It dyes rayon exclusively, the yarn being skein dyed. Operations at the Charlotte plant are under the direct supervision of Karl Ginter. Mr. Ginter is recognized as one of the leading rayon dyers of this country. His long experience in this field includes work in foreign countries as well as in America.

The Industrial Dyeing Corporation has for 10 years been dyeing rayon yarns and is in a position to render unusually efficient service to mills requiring dyed rayon yarns.

Louis Wisner, president of the corporation, is now located in Charlotte and will call upon the trade in the Southern territory.

And Now

INDUSTRIAL PREMIER

New Improved

SO RAPID are the strides being made throughout the great Textile Industry in the use of Rayon that its manufacturers face a great responsibility.

Progress is the penalty of leadership. Who can be content with today's work when perfection is the goal?

This Spirit of Progress is typical of this organization—a part of our creed in rendering service to our customers. It is illustrated by a new and improved yarn—*Industrial Premier*. In enhanced running qualities, it represents a distinctive and noteworthy advance—a big stride forward.

Industrial Premier now on the market and ready for shipment —samples will be sent upon request.

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NEW BEDFORD, MASS.
Wamsutta Mills, Inc.
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CHARLOTTE, N. C.
407 Wilder Building

UTICA, N. Y.
Utica National Bank and Trust Building

PREMIER INDUSTRIAL RAYON

Rayon Made Marked Progress in 1927

(Continued from Page 24)

They include several thousand dollars' worth of the most intriguing spring designs in coats, frocks and lingerie. They will be displayed on living models in a very intimate and charming way before large groups of women in each city visited.

Uses of Rayon.

Outstanding uses to which rayon fabrics are now being put are cited by trade analysts who have been engaged during the past year in national research. Its widespread and increasing adoption in fashion circles is of particular interest. A high opinion is evidently being bestowed upon it by the French couturiers who are now employing a variety of rayon materials in their creations. One of these who came recently to these shores was Paul Poiret, who arrived last October for a lecture tour. He came unencumbered with tools for demonstrating his art. He scrutinized closely the American fabric market, and ultimately selected American-made rayons as worthy of the high place in which he holds the art of dress-making. His selections included rayon satins, rayon crepe de chine, rayon chiffons, rayon spiral crepes, and transparent velvets because these fabrics permitted him to obtain effects not possible with other fibers, and because they typified to him the fabric achievements of the New World.

Other uses to which rayon textiles are being largely put include underwear, draperies, bedspreads, upholsteries, negligees, linings (with an added interest in men's coats linings, widely used in this fabric by English tailors), interesting combinations with linen in table cloths (which, by the way, suggests a new rayon and cotton possibility); lounging robes for both men and women; pajama suits, curtains and far from least, laces, which, in fashion circles have recently received an emphatic impetus at the command of Dame Fashion herself.

Converters and mill stylists during 1927 showed increasing wisdom and ingenuity in rayon fabrics, particularly suited to the prevailing needs of the mode.

Sheer Rayon Fabrics.

The demand for sheers was reflected in launching rayon voiles on a large scale. The sheers, however, stimulated the sales of rayon satins, whose softness and smoothness enrich the beauty of the fabrics which veil them. The vogue for prints was reflected for the creation of rayon and cotton radium, one of the autumn's great successes and one that shows encouraging indications of future sales. These fabrics were made possible through the remarkable progress in the fabrication of rayon cloths. Mills have been successful in using rayon warps of high count and in weaving fine rayon yarns. In addition, the advantages of fine filament yarns have been fully recognized.

The fear that lightweight rayon fabrics are not practical has been completely dispelled. Retailers have little complaints about rayon. In knit underwear, for instance, where rayon is used alone and is subjected to continuous washings and hard wear, returns due to complaints amount to less than one-quarter of one per cent. A study among women users of these garments showed that 84 per cent are completely satisfied.

There are strong indications that sheer open weave fabrics and attractive prints will be in great demand in 1928. This means that sales of rayon, voiles, satins and all-rayon or rayon-and-cotton radiums will be much larger than in 1927. In that year, though popular, they were more or less on trial, but now that their merits have been proved, their momentum in 1928 will be even greater.

The vogue for spiral crepes and norocain crepes is significant in Europe, where large amounts of rayon are used in such fabrics. Since it has been clearly demonstrated that rayon can be successfully creped, there is good opening here for fabrics in which 150 denier is used in the filling to give the spiral effect. Yarns as fine as 65 denier have also been successfully creped. With the growing recognition of the superiority of rayon fabrics over those of simular weights heavily loaded with tin, the possibilities of developing rayon crepes for women's linings, underwear, etc., becomes apparent.

Woven fabrics containing rayon are also likely to be used widely for women's night apparel Most of the night gowns and pajamas at present are made either of woven cottons or woven silks. The difference in the price of the two materials, however, indicates the possibilities of a fabric wherein rayon would make possible a beautiful garment at a moderate price.

There seems to be a greater call for two-tone effects in taffetas readily produced in rayon and silk mixtures.

Opportunities also lie in the creation of fabrics which can well benefit by the growing popularity of China and shirting silks for sports wear.

Rayon Underwear.

Rayon in the underwear field is not a new story. Through its use in knitted fabrics as in other fine fabrics it becomes better and better known and appreciated as time goes on.

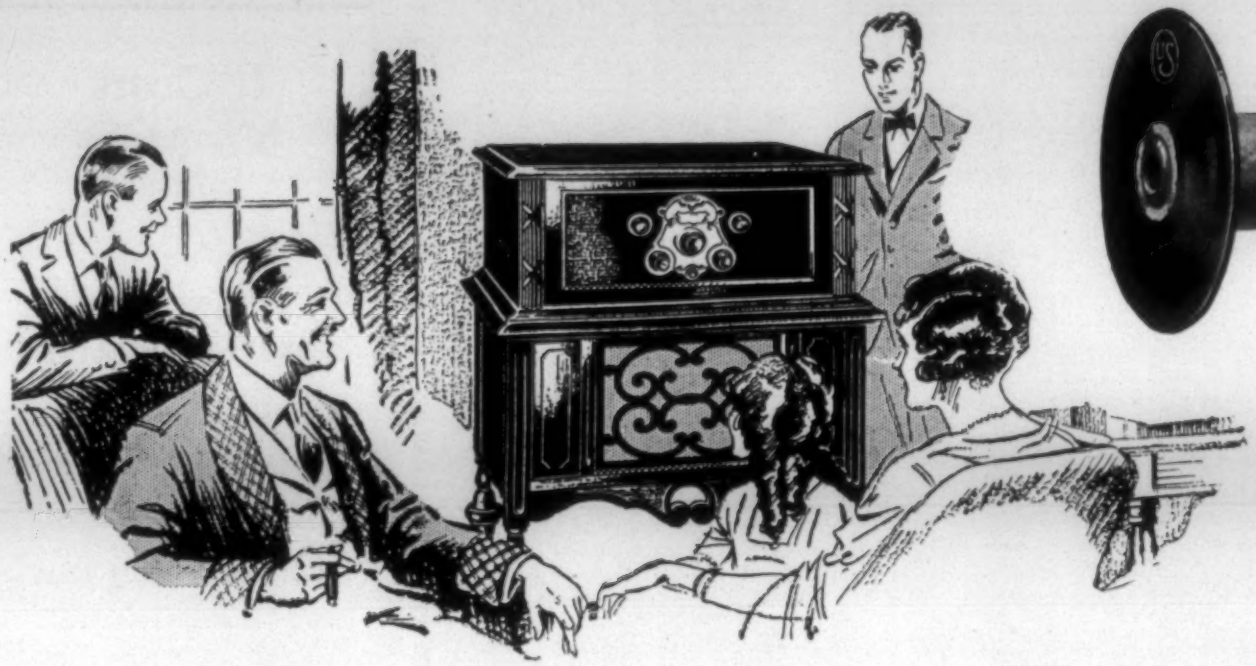
It would seem that one can scarcely meet a woman who does not know about and make use of rayon undergarments. Surveys have shown that its use is constantly increasing. Steady and consistent progress is shown in both men's and women's garments. Sales of rayon to underwear manufacturers in 1927 show an 86.6 per cent increase over 1926, or 13,762,250 pounds more in 1927 than in 1926.

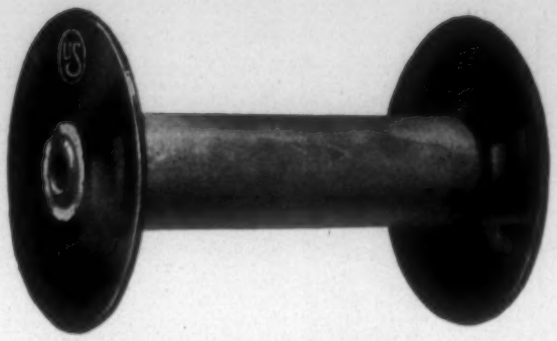
The latest report of the National Association of Hosiery and Underwear Manufacturers says:

"This class of merchandise has overcome all kinds of obstacles, many of them imaginary, and sales of good producers continue to mount steadily as does the quality of their product."

In 1927, 30 per cent of the total consumption of rayon in the United States went to the manufacture of undergarments. In pounds this amounted to 29,656,250 pounds as

(Continued on Page 54)





You insist on the Best Performance in Your Radio! Why be Satisfied with Less in Bobbins, Shuttles, and Spools?

Regardless of how low the price you wouldn't consider purchasing a radio of questionable quality. In personal matters like this you insist on the best, you want performance.

In your mill, too, you expect the best performance, but do you give your spinners and weavers the best Bobbins, Shuttles, and Spools, or do you buy strictly on price?

Six of our factories are kept busy producing U S Better Bobbins, Shuttles, and Spools. Mill men would not be buying our products in this volume, if they could buy similar quality at less cost.

The real cost of Bobbins, Shuttles, and Spools is not the quoted price. It is the first cost plus your waste and seconds accounts. That's where U S Better Bobbins, Shuttles, and Spools prove their economy.

Only the best materials and scientific workmanship backed by 50 years experience, enter into their making. Quotations on U S Products are not always high. Let us prove it.

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A Backward Glance Through 1927

(Continued from Page 28)

for weaving goods less than 40 inches wide and that a great many of the narrower looms installed in past years have been replaced by the wider looms. This tendency is said to be responsible for the discarding of large numbers of the older 27, 30 and 32-inch looms.

The growing use of silk and rayon, especially the latter, has been responsible for increased sales of machinery especially designed for handling this fibre. Many mills have replaced the older type narrow looms with the newer types of wide silk looms. These improved looms for weaving rayon and cotton fabrics, cotton and silk fabrics and all-rayon goods, many of them embodying recently developed features enable the mills to make fabrics of a distinctly better quality.

Southern Mills Using More Rayon.

All records for production and consumption of rayon were broken during 1927. It is estimated that the mills of the United States consumed a total of 100,000,000 pounds of rayon last year. Southern mills, of course, had an important part in this increasing use of rayon. Figures are not available showing the actual consumption by mills in the South. It has been estimated on good authority, however, that the mills used 30 per cent more rayon in 1927 than in 1926. This increase is further evidence of the trend in the South toward the manufacture of finer goods.

Southern Textile Association.

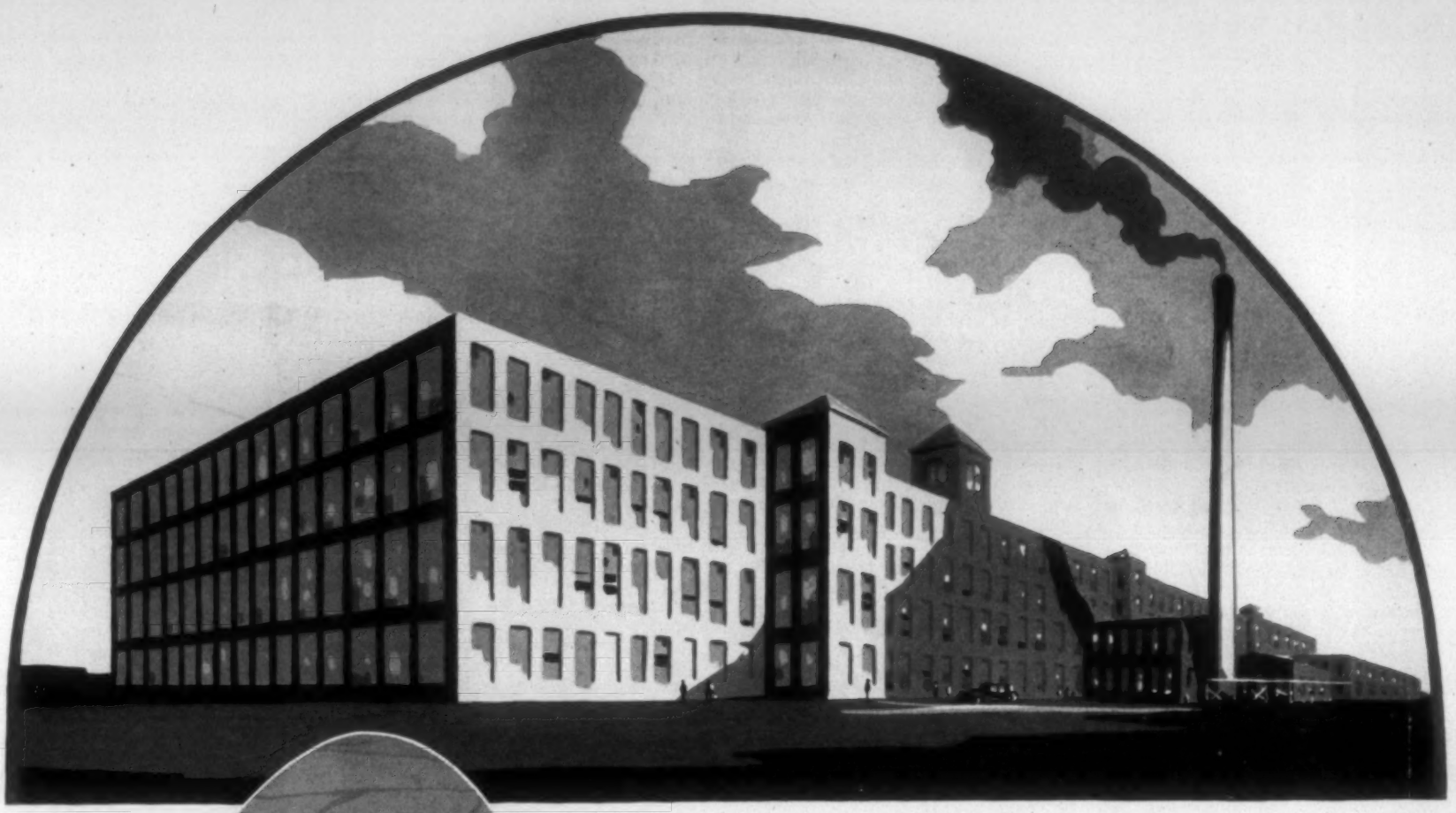
No review of Southern mill conditions in 1927 would be complete without reference to the work done by the Southern Textile Association. This association, composed of the superintendents and overseers, accomplished a great deal of constructive work during the year and gave renewed evidence that it has made a very distinct contribution to the operating efficiency of the mills. The technical meetings of the Association have not only succeeded in developing a wealth of valuable information, but have succeeded in having this information put into practical application among its members.

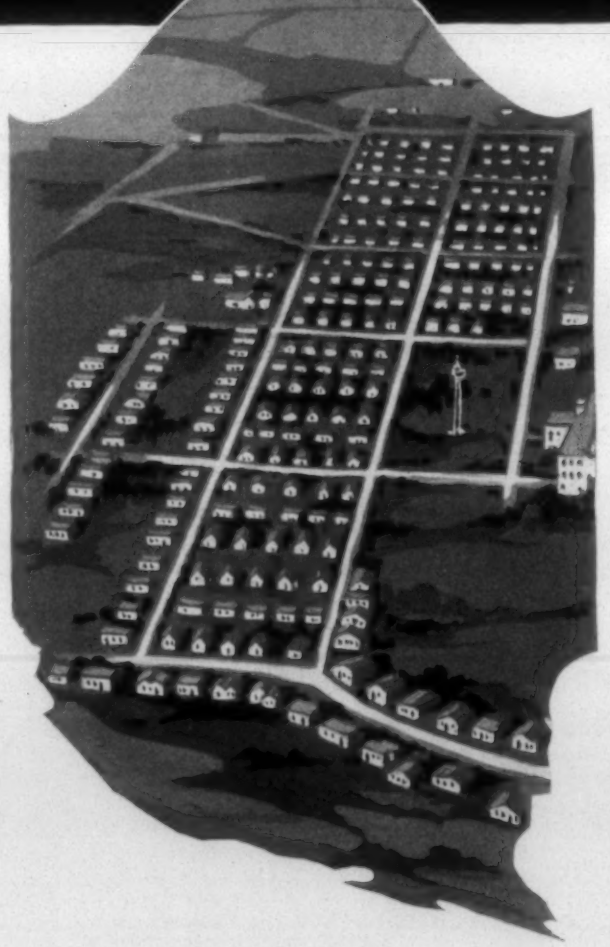
The Outlook.

The purpose of this article was to touch upon some of the more important phases of the mill situation in 1927 rather than to attempt a prophecy for 1928.

As the new year opened, mill operations both North and South, were being curtailed by approximately 20 per cent. To the casual observer, this lessened activity in any business so large as the textile industry, might appear as a distinctly depressing condition. Yet to those who are fully acquainted with the carefully studied reasons responsible for this curtailmemnt, it is a hopeful indication

Physically the Southern textile industry is more fit to meet competition than it has ever been. Mentally, the industry is more alert than ever before. These two factors of physical and mental fitness should prove of real advantage in meeting whatever problems 1928 may bring.





This new addition of the American Textile Company of Atco, Georgia, increases their equipment for the production of drills, sheetings and osnaburgs from 35.000 ring spindles to 50,000 ring spindles and 1200 looms.

It is interesting to know that this company was one of the very first to better their employee living conditions by constructing for them a comfortable, healthful mill village in which each house could rent at a minimum.

The growth of the American Textile Company since 1910 is a reflection of their progressive, efficient management. We are proud to number them among our textile clients, for both the mill and the mill village are the combined work of our Architectural and Engineering departments.

Whether it is a question of changing location or increasing present capacity, we will be glad to furnish you, without obligation, with exact data on each phase of your problem.

ROBERT AND COMPANY

ATLANTA INCORPORATED GEORGIA

Architects and Engineers

Rayon Made Marked Progress in 1927

(Continued from Page 50)

compared to the total of 15,894,000 pounds in 1926—24 per cent of the total consumption for that year.

Hosiery.

The review of the National Association of Hosiery and Underwear Manufacturers says that a like interesting increase has been shown in rayon bought by hosiery manufacturers.

Overcoming an unnecessary gloss in rayon hosiery and introduction of such fashion interests as the pointed heel have been of value. Private tests have shown the practical impossibility of discriminating between a well made pair of rayon stockings and silk of like denier and workmanship.

Laundering Qualities and Methods.

As was brought out in the extensive survey of the undearwear market made by the National Retail Dry Goods Association last year, very few stores are now asking for improvement in the laundering qualities of rayon This survey showed that only 2 per cent of the complaints were due to laundering troubles, and this relieves in a very satisfying way this former doubt apparent in dealer and consumer attitude

It may be noted that all fine fabrics should be carefully laundered; that is, that soap flakes should not be thrown directly upon the garments, nor cake soap rubbed on them. Soap flakes should be dissolved in very hot water. The temperature of the water then reduced until luke warm (colored things should never be placed in hot suds) and the garments washed by a process of dipping and carefully squeezing the suds through and through the fabric. Lift out of the water only when necessary to open up any folds that might enclose loosened dirt. If there are any particularly soiled spots, do not rub, but repeat the process of squeezing the suds through.

Several suds, should, of course, be used on excessively soiled garments. A clear, brilliant new appearance of a white or tinted back ground can not be expected if dirty suds are used.

Rinse thoroughly using plenty of lukewarm or cool water that removes the last remnant of loosed soil and soap left in the fabric from the suds bath. Three rinses are usually ample.

Squeeze out as much water as possible but do not twist or pull.

Hang up to dry immediately, preferably over a rod sufficiently broad as not to place all the pull in a small area of the fabric. It is best to dry quickly in a good current of air in the shade.

When nearly dry press with warm iron—not hot. Too hot an iron may fade the colors and injure the lustre. Both rayon and silk are easily scorched.

These directions apply simply and directly to all good and careful laundering of fine fabrics. Thus in following them the laundress is not confronted with a peculiar, difficult or different problem in handling her rayons.

Better Workmanship in Garments.

Distinct improvements have been noted during the last two years in the cut and finish of rayon undergarments. Increased softness is noted. These improvements are due, it is generally believed. to greater experience in manufacturing and to a considerable reduction in the price of rayon yarns which has allowed the manufacturers to give attention to better qualities of finished goods without increase in prices.

Rayon can be made absolutely run-proof by knitting on the same kind of a machine used for glove silk. However, complaints of runs in garments knitted on other machines are due to poor yarn or poor knitting, or because the consumer has not given the garments proper care.

Rayon has been taking about one half the sales of bloomers and vests, it is learned.

Although complete figures are not available for 1927, the report of the National Retail Dry Goods Association showed that the sales of rayon underwear for women lead the fabrics. Rayon was 36 per cent of total sales; silk 33 per cent and cotton 31 per cent. Woven underwear appears to have been bringing less sales in dollars to retail stores than knitted. In 1926 the total sales of rayon silk and cotton underwear in woven materials was 43 per cent, while 57 per cent was knitted.

Questions put to hundreds of women throughout the country have brought forth the following answers as to why they like rayon underwear:

	Percent
Wears well	27
Soft	18
Appearance	16
Comfortable	10
Easily washed	10
Price	10
Miscellaneous	9
	100

Wool Resists Sun Better Than Silk

Berlin.—A German technician has found that wool offers more resistance to the disintegrating action of sunshine than does silk, cotton or linen.

Exposing several fabrics to the weather for a given period of time, he learned that the ultra-violet rays of the sun affected silk more rapidly than any of the other textile fabrics submitted to the test. It took less than 200 hours of sunlight to deteriorate the silk, while chrome wool was comparably affected in about 900 hours. The time for cotton was 940 hours, for flax 990 hours, for hemp 1,100 hours and for raw wool 1,120 hours.

Anderson, S. C.—Damage estimated at $15,000 was done by fire which destroyed a cotton warehouse of the Toxaway Mills here. It is believed the fire started in stored cotton several days ago.

Spartanburg Mills Form One-Third Of Tax Values

Textile mills of Spartanburg county, S. C., are valued at more than a third of the entire county evaluation in 1927.

The total textile mills evaluation of the South Carolina tax commission is $12,708,165; while county real, personal and miscellaneous property was something over $37,000,000 early in 1927.

Three plants of the county are evalued at more than $1,000,000, these being Pacific at Lyman, $1,301,500; Tucapau. $1,215,000; and Clifton, $1,024,000.

Pacolet and Spartan.

Pacolet, valued at $927,600 and Spartan, at $810,00, followed next while Arcadia, Victor, and Beaumont each topped half a million.

Figures for the 3 mills follow:

Appalache Hosiery Mill, $8,500; Arcadia Mills, No. 1 and No. 2, $711,000; Arkwright Mills, $298,000.

Beaumont Manufacturing Company, $600,000; Blue Ridge Mills, $35,000.

Chesnee, $354,000; Clifton Manufacturing Company, $1,024,000; D. E. Converse Company, $530,000; Cowpens, $170,000; Crescent Manufacturing Company, $500,000.

Drayton Mill, $400,000.

Enoree Mill, $430,600.

Fairmont, $450,000; Franklin Process Spinning Mills, $116,400.

Inman, $473,000.

Jackson, $195,000.

Mary Louise, $89,000; Mills Mill No. 2, $205,000.

Pacific Mills, Lyman, $1,301,500; Pacolet Manufacturing Company, $927,600; Pelham Mills, $28,415; Powell Knitting Mill, $64,000.

Saxon, $476,300; Shamrock Damask Mills, $21,750; Spartan Mill, $810,000; Spartanburg Underwear Company, $1,000; Star Hosiery Mills, $27,600.

Tucapau, $1,215,000.

Valley Falls Mill, $225,000; Victor-Monaghan (Appalache plant) $247,400; Victor-Monaghan (Victor plant), $706,000.

Whitney, $382,500; Woodruff Cotton Mill, $453,800; Wadsworth, $80,000.

Night School Work Increases Output Of Workers

Columbia, S. C.—Pupils who attend night schools and adult schools in South Carolina and work in textile plants by putting their knowledge to actual use, increase production of the plants employing them, according to Alexander Long, of Rock Hill, financially interested in mills in York, Chester and Newberry counties. Mr. Long was in Columbia attending a meeting of the State committee on literacy, and he told of an experience he had had showing the actual value of education.

A group of workmen who had attended night schools and had shown improvement in their work in the mills, was transferred to another mill under the same ownership. Results obtained in this mill exceeded expectations, according to Mr. Long, and production showed an impressive gain, even though the workmen were employed in mills where there had been no change in foremanships and superintendencies.

Mr. Long says his faith in the value of education is increased and he faces the work of the literary committee with renewed enthusiasm.

Others attending the literacy committee meeting were: Dr. S. H. Edmunds, of Sumter; Miss Mabel Montgomery, of Marion; J. H. Hope, State superintendent of education; Dr. Patterson Wardlaw, of the University of South Carolina, and Miss Wil Lou Gray, State supervisor of night and adult schools.

The committee mapped out a program of activity for 1928, with a view to redoubling efforts to wipe out illiteracy in the State by 1930.

Valuable Publicity

The leading article in "Business," a trade publication for business men, is devoted to the work of the Cotton-Textile Institute. "Here is an industry," it says, "that is being rejuvenated through the medium of study—study of the industry's market and of its internal operating methods." Three pages with photographs tell the story of the Institute and what it is doing to bring more prosperity to the textile industry. "Wider uses of such commodities as tents awnings, cotton bags for fertilizer, feed, flour, sugar and the like" are some of the results already achieved by the Institute.

Another important contribution to the widespread literature on the textile industry is a brochure issued by the Manhattan National Bank of New York under the title of "King Cotton." This institution makes a practice of producing attractively written and well illustrated pamphlets on various industries and the one on the cotton textile industry is exceedingly interesting.

Not the least important work of the Cotton-Textile Institute is the attracting of such valuable publicity. Whether it is voluntary on the part of the publicatons we do not know, but we do know that it is first-class advertising of an industry in which we of South Carolina are vitally concerned.—Greenville Daily News.

Good Annum Closed By Newberry Mills

Newberry, S. C.—The Newberry Chamber of Commerce gives out some interesting facts and figures in regard to business affairs in Newberry county in 1927. The four mills of the county, three of which are located in Newberry, and the other in Whitmire, did a total volume of business of approximately $8,000,000. The payroll amounted to $1,673,000 which was a gain of $264,000 over the previous year. The estimated increase in payroll is equivalent to a cotton mill of 35,000 to 40,000 spindles. These mills consumed 48,000 bales, which was an increase of 7,535 over the year previous. The mills employed 2,550 or 200 more than were employed in 1926.

Cotton Types That Fulfill Southeastern Requirements

By R. Y. Winters, North Carolina Experiment Station.

IN recent years we have witnessed a tremendous development of cotton manufacturing in the Southeastern States. So rapid has been this growth that related trades and industries have been unable to keep pace with it. This is particularly true of cotton production and marketing methods. The commercial marketing agencies, to a large extent, have failed to reflect the needs of the cotton manufacturer to the cotton grower.

Even under these conditions considerable progress has been made during the past five years in the production of cottons desired by our local mills. The development of cooperative marketing has been quite large responsible for the recent improvement. The more efficient marketing which has been stimulated by this movement has in turn created greater interest in improved cottons of longer staple The progress in future lies quite largely with the cotton grower and his attitude toward cooperative production of marketing. Changes that are now being made in the types of cotton produced should be guided by reason in order that future progress may be sound. With this in mind, let's consider some of the changes necessary in our production program in order to supply Southeastern mill requirements.

A comparison of the records for cotton production and those for mill consumption in the Southeastern States will show that approximately five million bales are produced, and slightly less than this are consumed by the local mills. At first sight this would appear to be a case of ample supply and fair demand. As the facts are examined more carefully we find that this is not the case. There is no question about the amount of cotton produced, but it is not being consumed by the local mills. The records of our Atlantic and Gulf export markets indicate that approximately three-fifths of the Southeastern cotton is exported to Europe and other foreign countries. This leaves a considerable portion of our local mill consumption that must come from the other sections of the country.

There must be some good reason for this condition. Those who have studied the problem most closely have given three primary reasons for the present method of distributing Southeastern cotton.

1. Trade custom.
2. Approximately 85 per cent of Southeastern cotton is less than an inch in length.
3. Some of the Southeastern mills prefer Wstern cotton.

Suppose we discuss these reasons briefly with the idea of using them as a guide to our future production program.

We are all more or less victims of customs or habits, and the cotton trade is no exception. Certain areas of the East because of their favorable location for export or because of trade contact with European markets, have for many years been inch cotton. Four-fifths of the cotton consumed included lengths of an sources of export cotton. This has consisted quite largely of cotton seven-eighths or less in length. If this trade were profitable and satisfactory to both the producer and the foreign manufacturer, this discussion might be closed with that statement. As a matter of fact, neither the foreign manufacturer nor the local growers are satisfied. The foreign manufacturer is complaining about the mixed quality of cotton he receives and the growers are very much dissatisfied with the fact that they are unable to secure a satisfactory premium on their better cotton. It is interesting to note that communities that standardize upon one variety of cotton and take care to keep pure seed, soon become popular markets for our local mills, regardless of their past status. According to a recent report of the Federal Department of Commerce, the five-year period just following the war marked a decrease in exports of cotton from the Southeastern States. This was undoubtedly due in part to the increase in consumption of local cotton by the mills of this area Regardless of what is bringing about this change, we, as cotton producers, cannot afford to compete on the basis of producing short mixed cottons. We must compete on the basis of better quality.

In the beginning of this discussion it is reported that approximately five million bales of cotton are produced in the Southeast and that slightly less than this amount is being consumed by the mills of that area. Some attempt has been made to compare the staple lengths of the cottons produced with those consumed by the mills. For types used by mills and the records of cooperative marketing association and surveys of Federal Bureau of Economics for the types produced. These records are by no means complete, but they represent the best information available at this time. This information indicates that the mills of the Southeast require thirty per cent of their cottons of an inch or better staple. The present production of this type of cotton in the East would not supply more than half of this demand. We are primarily producers of short cotton, 85 per cent of our cotton measuring less than an inch in length.

This information points very clearly to the necessity for improvement in standardization and length of cotton produced. To say that we should increase the production of cotton of an inch or longer staple is a little too general. The relation of demand to specific staple lengths should be known more definitely. For this purpose I have taken the number of bales of the different lengths consumed by 300 mills in one of the leading cotton manufacturing States of the South. These mills consumed 600,000 bales of cotton ranging in length between an inch and an inch and three-eighths.

(Continued on Page 60)

Study of Spindle Hours

(Continued from Page 22)

	Spindles in Place	Active Spindles	Idle Spindles	Active Spindle Hrs.	Av. Hrs. Per Spindle in Place	Working Days
Jan., 1925	2,792,006	2,323,276	468,730	507,032,852	182	26½
Feb., 1925	2,788,330	2,373,078	415,252	475,647,471	171	23 2-3
Mch., 1925	2,787,434	2,364,710	422,724	519,072,033	186	26
Apr., 1925	2,787,434	2,381,718	405,716	544,313,188	195	25 2-3
May, 1925	2,788,752	2,313,042	475,710	461,990,200	166	25½
June, 1925	2,788,434	2,269,206	519,228	436,701,978	157	26
July, 1925	2,787,638	2,234,878	552,760	446,815,351	160	26
Aug., 1925	2,773,538	2,167,102	606,436	398,114,882	144	26
Sept., 1925	2,721,278	2,020,518	700,760	420,450,097	155	25½
Oct., 1925	2,709,704	2,203,680	506,024	485,981,667	179	26¾
Nov., 1925	2,706,326	2,205,310	501,016	419,146,423	155	24½
Dec., 1925	2,685,690	2,216,774	468,916	493,074,081	184	25
Jan., 1926	2,668,634	2,278,434	390,200	472,211,524	177	25½
Feb., 1926	2,666,826	2,310,242	356,584	463,588,466	174	23 2-3
Mch., 1926	2,660,538	2,313,912	346,626	530,024,353	199	27
Apr., 1926	2,659,124	2,209,286	449,838	445,090,042	167	25 2-3
May, 1926	2,657,152	2,114,578	542,574	382,312,054	144	25½
June, 1926	2,649,276	2,079,954	569,322	392,509,318	148	26
July, 1926	2,612,680	2,056,032	556,648	320,795,476	123	26
Aug., 1926	2,573,684	1,903,938	669,746	345,201,876	134	26
Sept., 1926	2,548,152	2,130,284	417,868	440,049,281	173	25½
Oct., 1926	2,537,396	2,180,142	357,254	454,594,230	179	25¾
Nov., 1926	2,525,698	2,118,228	407,470	396,853,566	157	25½
Dec., 1926	2,511,566	2,095,510	416,056	456,333,161	182	26
Jan., 1927	2,509,442	2,089,012	420,430	417,604,078	166	25½
Feb., 1927	2,508,866	2,124,078	384,788	424,545,084	169	23 2-3
Mch., 1927	2,508,866	2,076,718	432,148	499,055,665	199	27
Apr., 1927	2,487,724	2,123,970	363,754	455,845,060	183	25 2-3
May, 1927	2,482,632	2,104,534	378,098	452,766,007	182	25½
June, 1927	2,469,380	2,068,888	400,492	485,700,923	197	26
July, 1927	2,468,790	2,031,100	437,690	367,332,520	149	25 1-6
Aug., 1927	2,441,160	2,080,610	360,550	444,671,701	182	27
Sept., 1927	2,467,560	2,024,558	443,002	437,524,175	177	25½
Oct., 1927	2,451,308	2,011,622	439,686	419,747,038	171	25¾
Nov., 1927	2,410,480	2,000,706	409,774	399,943,400	166	25¼
Dec., 1927	2,402,000	1,947,000	455,000	385,120,000	160	25

Cotton Types That Fulfill Southeastern Requirements

(Continued from Page 58)

A little more than half of this was inch and an inch and three-eighths. The remaining one-fifth included cottons of one and three-sixteenths to one and three-eighths. It would appear from this data that expansion in the class of inch to inch and an eighth cotton would be safest. To those who are already producing inch or longer staple, I would suggest that they hold to the type they are growing, being sure of pure and adapted seed and working for the expansion of that type in the community so as to develop a reputation for better quality. To those who are growing short cotton I would suggest that they compare their present variety with the best bred cottons of inch to inch and an eighth staple and choose from the lot a variety which will furnish better quality lint. The chances are that you can find a longer cotton which will yield equally as well as the short cotton which you are now growing.

Some of our Eastern mills tell us very frankly that they are unable to use our local cotton because of the better results secured from Western cotton Recent carefully conducted spinning tests, including cottons of the same varieties, indicate that it is not so much the locality as the care that has been used in the production of our cotton which count most in reducing waste and giving strength and uniformity to the yarn. The East can produce as good cotton as can be produced anywhere in the country, and we should proceed to do it by the more general use of better seed and a better program of soil improvement.

We have just completed a discussion of the types of cotton which fulfill Southeastern mill requirements. The following facts were presented:

1. The cotton mills of the Southeast consume approximately the same number of bales as are produced by growers of this area.

2. More than half of the Southeastern cotton is exported and more than half of the cotton consumed by local mills is brought in from other sections.

3. This is due quite largely to the fact that our cottons are too short, more than 85 per cent of the production being less than an inch in length.

4. The mills of the Southeast require 30 per cent of their consumption in cottons of one inch or longer staple. The types we are now producing supply less than half of the demand.

5. Detailed records of mill consumption, according to staple, length, indicate if we were to group together all of the cottons of an inch or better consumed by mills of the Southeast, one-half of it would be inch cotton, four-fifths of it would be included in lengths of inch to inch and an eighth, and only one-fifth above an inch and an eighth.

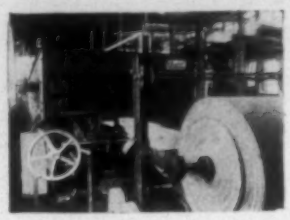
This information with the advice of local mills themselves would indicate that expansion in the production of inch to inch and an eighth cottons would be safest at this time.

6. Our possibilities of successful production of this type of cotton have already demonstrated by a large number of communities throughout the Southeast. With proper attention to pure seed, cooperative production and soil improvement, the Southeast can produce as good cotton as is produced anywhere in the country.

Greensboro, N. C. — Sub-contracts on the Juvenile Hosiery Mill, awarded by Burns-Hammond Construction Company, general contractors, are: Structural steel, Carolina Steel and Iron Company; plumbing, Hunt Bros.; roofing, North State Roofing Company, all of Greensboro, N. C. J. E. Sirrine & Co. are the engineers.

Belmont Processing Co.
Drying Cotton Warps

Hanes Hosiery Mills Co.—Proctor Automatic Boarding Machines



Highland Park Mfg. Co.
Tenter Housing

Up-to-date Drying--Down South!

DOWN South you see many excellent examples of the improvement and savings made by the newer types of Proctor Dryers for raw stock, yarns, warps, piece goods, hosiery, and other materials. You also find plenty of proof that up-to-date drying pays.

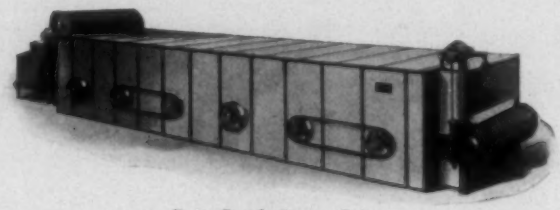
Installations of the New Proctor Super Dryer show raw stock drying raised to a new high plane. This dryer saves space, saves steam, saves trouble and money—and cotton stock dyers and bleachers of the South have been quick to accept these advantages.

A vast improvement in drying cotton warps has been made by the New Proctor Air Dryer. You find this machine in leading Southern warp processing plants.

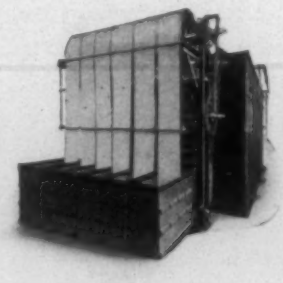
Tentering has been made more efficient for many cotton goods mills. This is the sure and profitable result of equipping tenters with the Proctor Tenter Housing.

Hosiery mills, with the Proctor Automatic Boarding Machine—cotton crepe, knit goods, and rayon piece finishing plants, with the improved Proctor Loop Dryer —yarn dye houses, with truck and automatic Proctor Yarn Dryers—these plants derive large benefits from up-to-date drying. Their experience counsels other users of dryers to investigate today's types of Proctor Dryers.

Proctor Yarn Dryer



Raw Stock Super Dryer



Proctor Loop Dryer

PROCTOR • & • SCHWARTZ • INC • PHILADELPHIA

1927 Active Year in Tennessee Textiles

Chattanooga, Tenn.—Progress in various branches of the textile industry in Tennessee in the 12 months just closed indicates a keener interest and confidence in this section of the South than ever before. Each of the past five years has been productive of additional textile investment, spindles for the first time having passed the 600,000 mark in 1927.

Tennessee's advance during 1927 particularly featured further expansion of the rayon industry and the initial movement of the silk industry into the eastern part of the State. The rayon and silk branches have followed as a logical sequence to the cotton spinning and mercerizing trades.

The most notable development during the year was the announcement of the American Glanzstoff Corporation, financed largely by German capital and capitalized in the millions of dollars, that it would erect the first of five units in a huge rayon project at Elizabethton. The new plant is to be located close to the American Bemberg Corporation's property, also German capital, that went into production last year. Bemberg, capitalized at $17,500,000, had the second of five units under construction during 1927, with 2,000 operatives already employed.

The Glanzstoff plant will produce rayon from wood fiber, while Bemberg is operating on cotton linters.

During 1927 also, Dupont Rayon Corporation, at Nashville, decided to erect a third unit at Old Hickory, near the City of Nashville. Dupont's original plant was erected in 1923, and investment now runs in the neighborhood of $10,000,000. About 3,500 operatives, evenly divided between men and women, are employed.

In the silk industry within the past few months several east Tennessee communities have announced the securing of new mills. Alspach Knitting Mills, at Lenoir City, Aronsohn & Hirschfield Silk Mills, at Morristown, and Warwick Knitting Mills, at Athens, are among the number. Charleston-Calhoun, Maryville and Lenoir City also are actively following this business. It is stated that six separate concerns have visited the last city in recent weeks.

In the Chattanooga district, Dixie Spinning Mills completed an $800,000 unit during the year that has increased its facilities to 45,000 spindles. Peerless Woolen Mills, Rossville, Ga., at the Chattanooga city limits, also completed a substantial building project.

Other mills making expansions or factory additions of one kind or another include Debonair Hosiery Mills, American Textile Woolen Company, Kingsport Knitting Mills, Magnet Knitting Mills, Appalachian Mills and Standard Knitting Mills.

The territory of middle and east Tennessee in which this expansion has been going on is served by the Tennessee Electric Power Company, with headquarters in this city. This company has been engaged in a large program of construction and additions to its power production and transmission facilities, involving expenditures of more than $25,000,000 in the last five years. In this period the company has increased its plant horsepower by over 70 per cent, having close to 300,000 now available, which is about evenly divided between hydro-electric and steam plants, thereby assuring continuous and dependable energy at all times.

During these years electric service has been widely extended in the State, the Tennessee Electric Power Company now serving directly more than 100 communities and wholesaling to many others. A number of these towns were without hydro-electric energy five years ago. As a result of the intensive development of the smaller communities, however, it is now possible for industry to decentralize its operations considerably. The result has been a development of many moderate and small plants in textile and other lines of business which have been able to locate in either the large or small towns, depending on their particular requirements and size of their operations. Practically all the textile mills in the State are operating on purchased power.

Despite its large sales of power in 1927, which are estimated in the neighborhood of 475,000,000 kilowatt hours, only 5 per cent or about 24,000,000, is used in the textile industry, indicating the wide diversity of industrial development in this section and showing the opportunities available for branches of the textile industry.

Growth and development of the State has called for increasing amounts of power each year. According to power company records the demand is compounding at a rate around 15 per cent annually. To anticipate local requirements it has been necessary to look ahead for a considerable period in order to work out a systematic plan for future power development. Applications are now on file before the Federal Power Commission at Washington by the East Tennessee Development Company, owned jointly by the Tennessee Electric Power Company and Knoxville Power and Light Company interests, for the purpose of securing preliminary permits for studies and surveys for the construction of 11 power and navigation dams on the upper Tennessee river and its tributaries between Chattanooga and Knoxville. The proposed projects call for the harnessing of approximately 600,000 horsepower or twice that now available on the Tennessee Electric Power Company system—a project that is separate and distinct from Muscle Shoals.

A review of the last five years in the textile industry in Tennessee disclosed a number of plants that have moved into the State from the North and East. The migration seemed to receive impetus with the coming of the Dupont's to Nashville in 1923, where they purchased a tract of 520 acres of land on the Cumberland river.

Knitting Machine Increase List

(Continued from Page 12)

Philadelphia Hosiery Mills, Philadelphia	15
*American Hosiery Mills, Shelbyville	4
Sweetwater Hosiery Mills, Sweetwater	64
Aycock Hosiery Mills, Whiteville	8
Total	1,017

Texas

Dixie Hosiery Mills, Fort Worth	40
Pool Knitting Mills, Sherman	9
Total	49

Virginia

*Artus Knitting Mills, Bristol	30
*Boyertown Knitting Mfg. Co., Bristol	90
*Chase City Hosiery Mills, Chase City	40
Lynchburg Hosiery Mills, Lynchburg	37
Pannill Knitting Co., Martinsville	63
*Twentieth Century Rayon Textile, Inc., Petersburg	220
*Cavalier Hosiery Mills, Inc., Pulaski	50
Dobson-Miller Corp., Pulaski	35
S. S. Miller Hosiery Mill, Rural Retreat	150
Total	715

KNITTING MACHINE INCREASE BY STATES

Alabama	465
Florida	19
Georgia	1,075
Kentucky	92
Louisiana	28
Mississippi	40
North Carolina	3,571
South Carolina	120
Tennessee	1,017
Texas	49
Virginia	715
Total	7,191

Mills Study Production and Demand

One of the bright spots of the past year in the cotton textile industry has been an increasing realization by the mills that it is advantageous to keep their production in line with demand, Spencer Turner, president of the Association of Cotton Textile his remarks to the members at their Merchants of New York, stated in annual meeting. The meeting was held in the rooms of the Association at No. 70 Worth street.

Mr. Turner review briefly the association's work during the past year; four new directors were elected, and committee reports on activities of the association were submitted. Officers for the ensuing year will be elected later at a meeting of the new board of directors.

"Material progress has been made in this branch of the industry during the past year toward meeting our problems with a singleness of purpose," Mr. Turner said. "Among the numerous phases of the association's work there have been increasing activities among the groups within our membership. There also have been contacts with other branches of the industry which have brought us into harmonious co-operation, particularly with the new organization of wholesalers and the Cotton-Textile Institute.

"The work of the association in furnishing statistical information has been particularly valuable in helping the mills to realize that it is to their advantage, as well as to the stability and prosperity of the entire industry, for them to keep their production in line with demand. This has been only one of the numerous services which the association has rendered to the entire industry during the past year."

The new directors who were elected at the meeting to serve for three years are:

Bertram H. Borden, of M. C. D. Borden & Sons, Inc.; Jacques Bramhall, of Amory, Browne & Co.; S. obert Glassford, of Bliss, Fabyan & Co., Inc.; T. Holt Haywood, of T. Holt Haywood Dept., Fred'k Vietor & Achelis.

A LETTER—12

Cliffside Mills.

Cliffside, N. C., Jan. 21, 1928.

Mr. David Clark,
Charlotte, N. C.

Dear Mr. Clark:

Have just read your editorial on "Blanshard and His Buddies" and want to say that as a textile worker and a Southerner and Tar Heel I thank you from the bottom of my heart for your able arraignment such a scalawag. The textile industry and the textile workers of the whole Southland owe you a debt that they can never pay. May God in His infinite wisdom see fit to spare you many years yet in the great work that you are doing.

Respectfully,

S. L. THOMPSON,
Overseer of Finishing.

Spinning Less Active in December

Washington, D. C.—Activity in the cotton spinning industry declined in December as compared with November, the Census Bureau's monthly report indicated, and also was lower than in December a year ago.

Active spindle hours for December totalled 7,859,363,372 or at 215 hours per spindle in place, compared with 8,680,217,297, or 238 per spindle in place, in November, and 8,563,136,989 or 229 per spindle in place, December a year ago.

Spindles in Place.

Spinning spindles in place December 31, totalled 36,494,496, of which 31,715,388 were operated at some time during the month, compared with 36,436,512 and 32,269,478 in November, and 37,404,472 and 32,496,259 in December a year ago.

The average number of spindles operated during December was 34,428,611 or at 94.3 per cent capacity on a single shift basis compared with 39,152,479 or at 107.2 per cent capacity in November and 37,511,552 or at 200.3 per cent capacity, in December a year ago.

Clemson Seeks Mill Support

The South Carolina Cotton Manufacturers' Association support in a proposed expansion program for the Clemson College textile department was pledged Saturday at a special meeting of the executive committee with Dr. E. W. Sikes, president of the institution, and H. W. Willis, director of the school's textile department.

A committee was also appointed to assist Miss Lilliam C. Hoffman of the University of South Carolina extension department in securing a cotton display for the State Teachers' meeting to be held in Greenville. H. A. Ligon of Spartanburg and T. M. Marchant and S. M. Beattie of Greenville were named on the committee.

Cost Is Small.

Miss Hoffman hopes to influence teachers of the State that cotton goods are not only cheaper but are in fact more healthful in this climate. Miss Hoffman hopes to be able to offer a prize to school girls for the best commencement dress made of cotton goods. She is investigating the use of flour sack cloth for making dresses, she told the cotton men, and finds that a garment can be made of three sacks costing 8 cents each.

Following the meeting, Dr. Sikes told a reporter of the effort the textile department at his institution is making to give cotton men such information as they may find helpful, such as the agricultural extension division is acording those interested in farming. There is a close cooperation, he says, between the college and mill executives.

The textile course is becoming more and more practical, he declared. The curriculum has been changed this year so that next summer all textile students will have to work in cotton mills in order to get credit for diplomas. Mr. Willis, the new head of the department, was brought up in mill work and many freshmen from textile centers are now taking the courses.

Mr. Willis is a native of Spartanburg county, having been reared at Clifton. After graduating at Clemson he was a cotton technician for the United States Government.

New Methods Taught

A new method of teaching has been instituted in the department, the president said, which eliminates the necessity of students taking notes. Teachers make a thorough outline of any lecture they are presenting and distribute these among the students. The plan is saving the students much time, Dr. Sikes said.

Honor Memory of John Thorp

Boston, Mass.—The American cotton industry will celebrate the 100th anniversary of the invention of the ring spindle, a development which revolutionized the industry, at the spring meeting of the National Association of Cotton Manufacturers in Providence, April 25-26. Manufacturers throughout the country will assemble to honor the memory of John Throp of Providence, whose ring spindle patened November 20, 1828, made possible the ring spinning frame which has been the basis of the success of the business in the United States.

The work of the textile pioneers will be related at the Throp centenary meeting to be held, as the feature of the general observance in the old Slater Mill, Pawtucket, now a museum and which was the first successful cotton mill in America. Here the tremendous developments made since the pioneering days and which have brought textile manufacture and textile machinery to perfection will be shown through addresses, exhibits and pictures.

Although Throp spent all of his life in New England and many years in Rhode Island his name is almost unknown to the general public even in Providence. His series of inventions in addition to the ring spindle, all proved of great value to this section of the country as well as other textile centers in the world.

The general convention programme provides for registration at 11 o'clock Wednesday morning, April 25, in the Providence Biltmore headquarters. There will be a business session in the afternoon and a smoker in the evening.

The Throp centenary session will be held at the old Slater Mill at 10:30 a. m., Thursday, April 26. In the afternoon there will be a business meeting at Providence Biltmore and the centenary observance will be brought to a close with a banquet in the evening.

Col. G. Edward Buxton president of the National Association is general chairman and W. B. MacColl, Pawtucket, vice-chairman of the committees on arrangements; Philip C. Wentworth, Providence, is in charge of the smoker; Henry C. Dexter of Pawtucket, in charge of Slater Mill meeting; F. W. Howe, Providence, in charge of finances; Alexander West, Providence, in charge of transportation and John F. Reardon, president of the Southern New England Textile Club is in charge of arrangements for the banquet.

Cotton Goods

New York.—The cotton goods markets closed the week quietly, with some tendency toward price weakness apparent in a few lines. Only a fair amount of trading was noted in print cloths and sheetings and they held barely steady. Domestics, in both brown and bleached goods, were quiet, as were sheets and pillow cases. Coarse yarn colored goods were in slightly better demand. Cotton duck was quiet and only a fair amount of business was noted in tire fabrics.

Production reports indicated that curtailment of about 20 per cent was the rule in print cloths, fine cottons, sheetings, duck and wide sheetings.

Buyers resisted attempts toward higher prices, many of them delaying their normal purchases for fall. Prices, however, in primary markets are very low and many of them are based upon much larger stocks than are likely to be available within the next several months. Many prices are so nearly at csot and in some cases under costs that they would seem to offer little danger to buyers at this time.

The general report in fine goods sections was that business was slow, though occasional larger commitments are being placed, so infrequently, however, as to have little bearing on the general quiet tone. While a number have been doing nothing others are getting filling-in orders. Buyers have made more than ordinary efforts to weaken the price basis assumed by mills, while the latter have preferred to fight off the weaker tendencies which have sprung up because of inactive conditions. Various mills ask for bids and then refuse to consider those which are tendered them.

Business done in small lots of print cloths was somewhat better before the week ended. First hands were offering 64x60s more freely at 7⅞ cents, with limited sales at that price by both mills and second hands. Two or three centers were 8¾ cents for January-February delivery, at the week end, first hand. The majority had been asking seven-eighths. On 72x76, 10 cents continued to be the general quotation. Early in the day second hands offered 80 squares at 10⅝ cents and later this was being heard first hand.

The market on 60x48s was 6⅝ cents at the close. For delivery commencing two to three weeks, some first hands quoted 5¼ cents on 38½-inch, 44x40, 8.20 yard, with sales at that price. Fair-sized lots of 38½-inch, 48x48, 7.15 yard were reported sold at 6¾ cents for later delivery. Later shipments of 38½-inch, 64x56, 5.50 yard were reported at 7¾ cents; some asked 13-16 for delivery end of February; there were bids for spots, but quick or nearby goods seem difficult to find.

In sheetings inquiry from the bag trade for a rather good quantity of a few numbers was reported in several centers. There were efforts to buy some very late deliveries of certain styles, in which the mills were not interested. Particularly mentioned in this connection was 36-inch, 40x40, 6.15 yard. Several stated they could have sold a substantial yardage for March-April-May. There have been bids for several days past of 5⅝ cents net. While there had been occasional reports of quick or nearby goods obtained in second hands at that price, the impression prevails that the amounts were limited. At any rate, some have reported a fair business at three-quarters.

Some 36-inch, 48x48, 5.00 yard sold at 7¼ cents net; sales of 36-inch, 48x40, 5.50 yard at 6½ cents net; in 36-inch, 56x56, 4.25 yard, 9 cents net was paid; for 36-inch, 56x60, 4.00 yard, 9½ cents net was paid; the last on 37-inch, 48x48, 4.00 yard had been 8⅛ to one-quarter net; first hands sold 36-inch, 69x68, 3.50 yard in a limited way at 11¼ cents net.

The tire fabric situation has held strong and continued demands for opundage are to be met with. A few larger inquiries have come to hand during the last few days and several smaller commitments have been placed. The price basis is steadier than it was, though several mills quote lower than average.

At the close, 11 cents seemed to be the market on 100x60 carded. There have been reports that this price was shaded for one of the less choice makes, first hand. On 80x60 card, 9⅜ cents the best heard; 10⅜ to one-half on 90x60s. Choice makes of 128x68 combed offered at 17 cents, first hands.

Beyond scattered trading, buyers showed little interest in the Fall River print cloth market for the week and the period was one of the quietest in some months. The volume of sales will hardly reach 20,000 pieces, a wide variety of constructions making up this total. Business has been of the filling in type, although in a few instances fairly sizable quantities were bid at prices which mills refused to entertain. In addition to the regular print cloth constructions there was trading in a small way in twills, sateens and marquisettes. Deliveries have been wholly spot.

Cotton goods prices were as follows:

Print cloths, 28-inch., 64x64s	6
Print cloths, 28-in., 64x64s	6¼
Print cloths, 28-in., 64x60s	6
Print cloths, 27-in., 64x60s	5¾
Gray Goods, 38½-in., 64x64s	8⅝
Gray goods, 39-in., 68x72s	9¼
Gray goods, 39-in., 80x80s	11
Dress ginghams	16¾a18½
Brown sheetings, 4-yd. 56x 60s	10¼
Brown sheetings, stand.	13½
Tickings, 8-oz.	22½a24
Denims	18
Staple ginghams, 27-in.	10½
Kid finished cambrics	8¼a 9¼
Standard prints	8¾

The Yarn Market

Philadelphia. Pa.—The yarn situation showed little improvement during the week. Inquiry for carded yarns was slightly better during the last part of the week, but prices offered were well under what spinners would consider. In many cases, a difference of two cents was noted in the buyers offers and spinners prices on knitting yarns. The price list was generally unchanged although somewhat lower quotations were reported early in the week.

The curtailment program inaugurated by Southern spinners of carded yarn became effective at the week end. Mills operating more than 900,000 spindles on carded yarns are expected to close their plants Fridays of each week until the following Monday morning, this reduction of output to be effective for an indefinite period. This curtailment is expected to have a strengthening influence upon the market within a short time. From the best information available here, there has been very little accumulation of stocks, even under the slow demand that has been noted for some time.

Many consumers are still at work on inventories, and dealers are hoping that with these completed demand will pick up. While few future contracts are being placed, spinners are said not to be anxious for such business at present, for, with the extensive curtailment that has taken place in the goods mills, spinners also have been cutting production, so that yarn prices are showing a firmer tendency, and they hope to secure contracts later at more advantageous prices. Although actual sales are rather slow some large operators are reported to be inquiring for substantial quantities.

Buying admittedly is disappointing, but there are no distress stocks of carded or combed yarns either in the markets or among the spinners, it is contended, and except for the dealers' moderate to small-size spot stocks, additional yarn supplies wanted by consumers must come from the spinners.

Southern Two-ply Chain Warps

8s	31
10s	31½
12s	32½
16s	34
20s	36
24s	39
26s	40
30s	41½
40s	50
40s ex.	54
50s	64

Southern Two-ply Skeins.

8s	31
10s	31½
12s	32
14s	33
16s	34
20s	36
24s	39
30s	41½
36s	48
40s	50
40s ex.	54
50s	63
60s	73
8s	32
10s	33
12s	34
16s	35
20s	37

Southern Single Chain Warps.

10s	31½
12s	32½
14s	33½
16s	34
20s	36
24s	38
26s	39
30s	42
40s	50

Southern Single Skeins.

6s	31
8s	31
10s	31½
12s	32
14s	33
16s	34
20s	35½
22s	36
24s	38
26s	40
30s	41½

Southern Frame Cones.

8s	31
10s	31½
12s	32
14s	32½
16s	33
20s	34½
24s	35
26s	36
28s	37
30s*	37½
30s	39½
40s	52½

Southern Combed Peeler Skeins, etc.—Two-ply

16s	48
20s	50
30s	58
36s	63
40s	69
50s	74
60s	82
70s	95
80s	1.05

Southern Combed Peeler Cones.

10s	41
12s	42
14s	43
18s	44
20s	45
22s	46
24s	49
26s	51
28s	53
32s	55
34s	56
36s	59
38s	61
40s	62
50s	73
60s	82
70s	95

Eastern Carded Peeler Thread-twist Skeins—Two-ply.

20s	47
22s	48
24s	49
30s	53
36s	59
40s	69
45s	80
50s	82

Weevil Emergence Of Yearly To Be Large

New Orleans, La.—A record emergance of boll weevils this year was predicted by the executive committee of the American Cotton Grower's Exchange which they said was based on information received from 3,000 representatives in all cotton regions of the United tSates indicating the heaviest hibernation of boll weevil in history.

To combat the weevil menace, the committee recommended to cotton growers that they not plant more acreage to cotton than they can cultivate intensively and effectively.

Want Department

FOR SALE

We offer the following machinery subject to prior sale.
May be inspected near Baltimore in operation at present, but offered for immediate delivery.

2 2-Beater Breaker Lappers, with feeders, Kitson make, $225.00 each.
3 1-Beater Finisher Pickers, Kitson Make, 45-inch Pickers $175.00 each.
57 45-inch Lowell Cards, good clothing. 1907-1911, $125, $135, $150 each.
108 Del. Lowell Drawings, 6 del. per head, $12.50 per delivery.
6 12 x 6 Lowell Slubbers, 72 spindles each, $250.00 each.
4 10 x 5 Lowell Intermediates, 112 spindles each, $250.00 each.
48 Lowell Spinning frames, 228 spindles each, 7½-inch traverse, 3-inch gauge, 2⅛-inch ring and 2¼-inch ring, $1.00 per spindle.
2 Lowell Warpers, 525 spool creels, $75 00 each.

If interested write, phone or wire

CHARLOTTE TEXTILE MACHINERY COMPANY
507 Wilder Building,
Charlotte, N. C.

Position Wanted

Experienced bookkeeper and general office man open for position. Efficient and reliable. Best references. Address "W" Box No. 844, Charlotte, N. C.

For Sale

400 shades new Emmons twine harness for 36 or 40 inch Model E. Draper loom. Used in making sley goods. In original box, never been uncrated. At a bargain. If interested, write K. M., care Southern Textile Bulletin.

Office Manager Wanted

Man of good address, habits, young, efficient, experienced. Capable of managing general details of office of well established textile machinery manufacturing plant. Experienced in bookkeeping, letter writing, etc. State qualifications, as suggested, naming salary wanted to start with. Give references. Splendid opportunity for the right man. Address Office Manager, care Southern Textile Bulletin.

Yarn Accounts Wanted

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